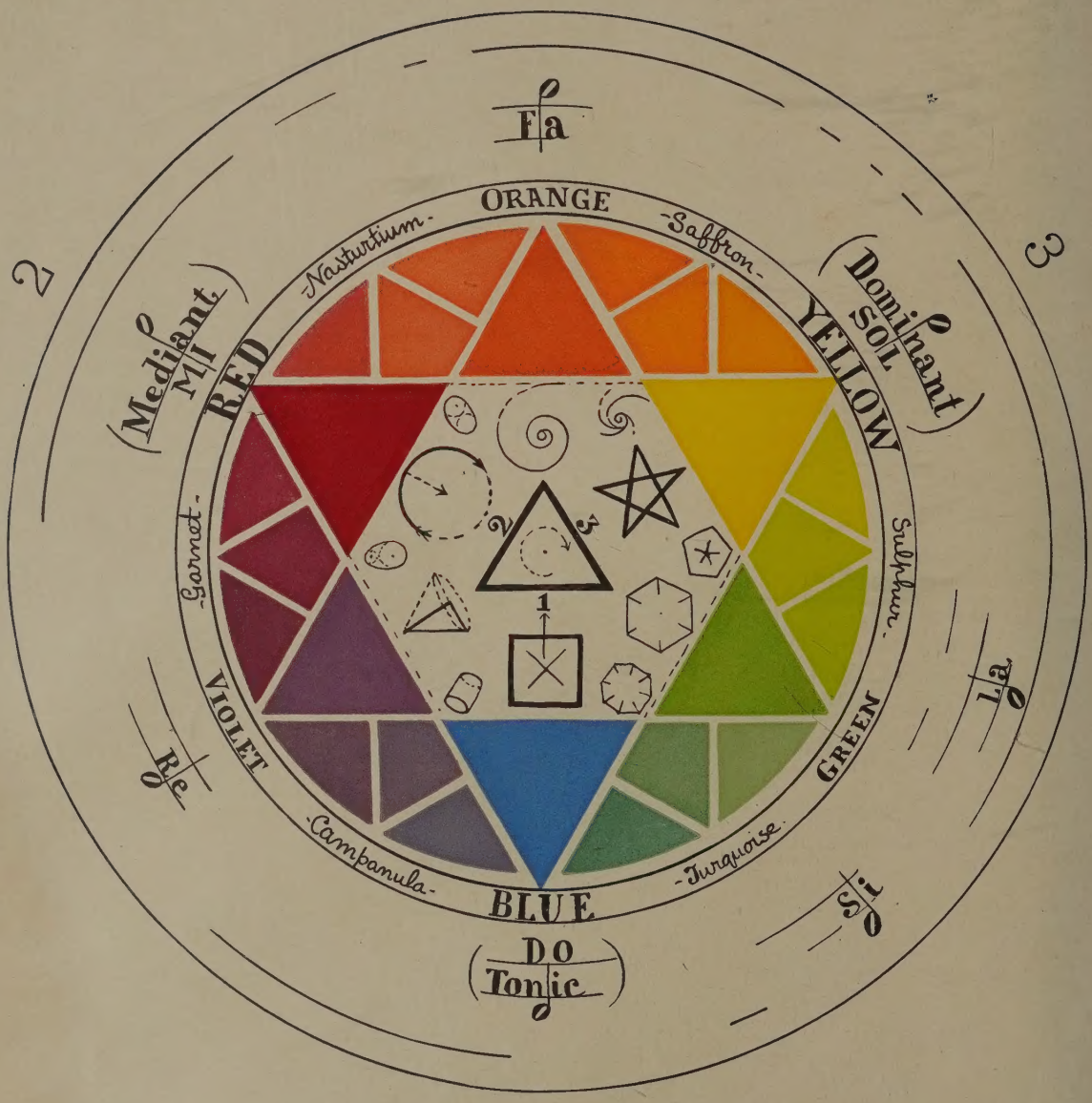
THE PHILOSOPHY OF BEAUTY

VITAL ART EDUCATION

Rev. Mrs Austin Taylor
Hollywood, California 1944

THE GATE BEAUTIFUL

THE PHILOSOPHY OF BEAUTY



THE LAW OF THE THREE PRIMARIES

Chart of Correspondences between

	1	2	3
FORCES, . . .	RIGHT	ROUND	RADIATE
FORMS, . . .	SQUARE	CIRCLE	STAR
COLORS, . .	BLUE	RED	YELLOW
TONES, . . .	TONIC	MEDIANT	DOMINANT

THE GATE BEAUTIFUL

BEING

PRINCIPLES AND METHODS

IN

VITAL ART EDUCATION

COPIOUSLY ILLUSTRATED

BY

JOHN WARD STIMSON

Formerly Director of Art Education at the New York Metropolitan Museum of Art; The Artist-Artisan Institute, New York City; The Art and Science Institute, Trenton, New Jersey, etc., etc.

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Author's Dedication.

To all true and beautiful Labor;

and to that most true and beautiful Soul

by whose loyalty, sympathy, comprehension and

consecration this tribute to God and Man was achieved:

To Martha, in Heaven,

this testimony of our

mutual constancy

and faith.

PREFACE

THESE compact Summaries of Thought are the quintessence of a lifetime of earnest and conscientious study, wide travel, and long, practical experience in professional teaching and superintendence over many departments of applied Art.

It is the OUTLINE of a Conviction (or Inspiration) drawn therefrom, and based upon the widest and sincerest scientific generalization attained. Its suggestions, implications, conclusions must be left to posterity and to Providence—but the record of their already far-reaching helpfulness and upbuilding among sincere students and workers by whom they are digested and applied, is a private treasure which time only sanctifies.

It is divided into two main sections—Theoretical and Practical—the first appealing to a more general public interest in Nature as a whole, as the great Studio of God, in which his elements and principles of beauty are cosmically revealed. The second appeals to the professional practitioner, and the director or teacher of class-room study, for whose convenience this special section is systematically arranged and condensed. The whole is intentionally left *suggestive* rather than final, that it may reach more broadly, and stimulate more effectively to general research into the stupendous Fact of Divine Beauty, so persistent and pervasive a presence and a power, a reality and a revelation around us! And that they may show to the mind, that vitalizing Spirit is more essential than its varying forms; and that eternal Principles are more pregnant and precious than their infinite examples.

It desires to supplement, not supplant, all sincere efforts of preceding workers, and to enhance and illuminate the otherwise too frequently chaotic collections of illustrations in museums and libraries—to which, with those of Nature, the author gratefully acknowledges full indebtedness.

JOHN WARD STIMSON.

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"AS SOON as Man desires to penetrate the Secrets of Nature, where there is no real secret, all that is needed is *Sight*; he can see that *the marvelous is the outcome of the simple.*"—*Balzac.*

PRINCIPLES AND METHODS

IN

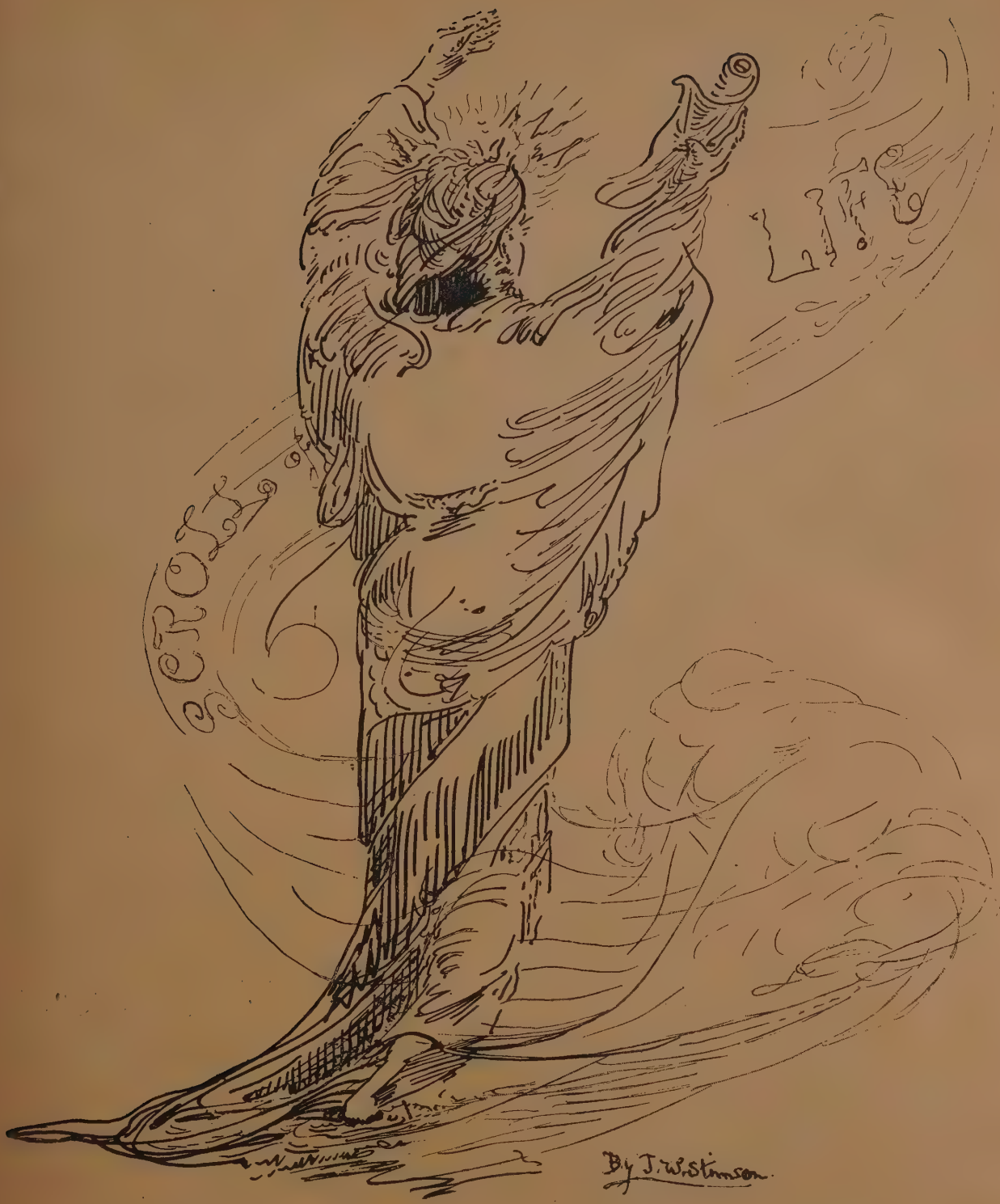
VITAL ART EDUCATION

CHAPTER I.

THE GATES OF LIFE

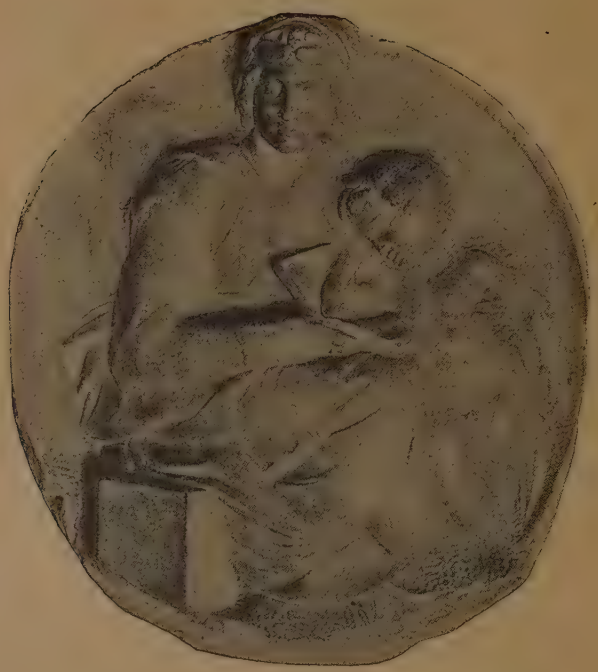
"BEHOLD, AN HAND was sent unto me; and, lo, A ROLL of a book was therein . . . written within and without."—*Vision of Ezekiel.*

"PREPARE ye the WAY of the Lord, make his paths straight."
—*John the Baptist.*



THE SCROLL OF LIFE

"I WILL GUIDE THEE WITH MINE EYE."—*Psalms*



MADONNA TEACHING THE CHRIST-CHILD

By M. Angelo

BUT YOUTH, too, has Eyes,
That came, but lately, from the skies,
And glisten with the dew of Paradise!
Mark well its glances,
Leading like auroral lances;
And its Hope—how it advances!

Raphael, Pinx.

HEALING BY PETER AND JOHN IN "THE BEAUTIFUL GATE" OF SOLOMON'S TEMPLE

THE GATES OF LIFE

"Lift up your heads, O ye gates; and be ye lift up, ye everlasting doors; and the King of glory shall come in."—DAVID'S PSALMS

THE DEMAND, to-day, is for the popularization of the Great Principles which underlie life,—be they physical, social, political, religious, artistic, or other.

On every hand is a consciousness of the mystery—the awfulness—of life! On every hand the evidence of a superior Order and Power to which man and nature bow. The mammoth crumbles at last as surely as the frailest butterfly; the tallest pine withers with the weakest grass blade. The strong man gathers the mantle of his fading flesh about him and lies down in the same dust as the child. The king with the peasant; the haughty with the humble; the cruel with the kind, the criminal with the saintly. At the inevitable Portal-of-the-Infinite all are ushered in and onward by the same stern warden, and "in that war there is no discharge"! Yet we are conscious of the infinite differences in *character* between the "cruel" and the "kind," the just or the unjust, the beloved or the execrated.

Mankind knows the tangible difference in their practical results and influences, and gathers glimpses of the Infinite Principles that (consciously or unconsciously) coöperate to occasion the vast discrepancies. On all sides shiver and creep the swarming multitudes of life that press to the banks of the dark river! Out of a happy hour of forgetfulness youth is too often startled by a strange cry it had not anticipated. The aged, tottering on, glance into each others eyes with sadness, hope or despair. The pompous or the

powerful find their baubles and their weapons smitten from their withered fingers by the same cold monitor; they pale and sicken and pass into oblivion. "Whither are we hastening?" is the pitiful cry of the vast stream that Destiny hurtles onward to the realms of Spirit, and they stare for help into each others faces whenever the senseless rush of egoism or the maelstrom of material appetite arrests its course for a scant hour of self-analysis, or is lulled to a breathing spell by conscience and reflection.

It is in such hours of spiritual suffering and weakness that humanity extends its drowning fingers to clasp some buoy of hope, safety and salvation; to grasp some reliable compass; to behold some steadily-guiding and unfailing star. Here is the opportunity alike of the God and the demon; the sincere and the hypocritical; the sympathizing and self-sacrificing humanist or the treacherous and unscrupulous speculator.

The reverential and pitiful seek among the debris of time for the substantial and the eternal Truths. They follow with patient and painstaking care the tottering footsteps of the race in its history. They analyze, with earnest eye, each milestone of essential progress, and hearken with tense ear and heart for every whisper of the divine Orpheus.

On the opposite hand are the vain, frivolous and scheming, the harlequin with his cap and bells who fiddles while Rome burns; the madman who deceives himself or hopes to profit in deceiving others. But slowly and surely the race divines its friends, and differentiates its foes. Slowly and surely it gathers out its lovers from its enemies. More and more it discerns, marshals and immortalizes its priceless beacon lights of Principle from its *ignes fatui* of cant and affectation.

One sacred pole-star of life, among the weltering billows and rocks of doubt, confusion and despair, is the growing consciousness of the race that Principles of Immortal Beauty forever cheer, console, sustain, upon *every* plane of material, mental and moral experience, because they are *vital to the experience of God himself, and visibly insistent upon every side of his activity.*

GOD'S highest law is Order, and with that established throughout the Universe, as much for earth as for heaven, most of the sin and sorrow incident to ignorance or confusion would disappear, bringing the health and beauty that is normal to Nature,—a state for which she has been travailing in pain until now.

These Principles must evidently be as universal as the universe, as applicable to all (be they high or humble) as is gravity. They can not be the fad nor the monopoly of the few. The stars in their courses fight against those who would limit or pervert these blessed influences. "Canst thou bind the sweet influences of Pleiades," asked the Deity of Job, "or loose the bands [the controlling heavenly tendencies] of Orion?" Thank God, no! The blessed forces for upbuilding of his higher and better kingdom on earth, are everywhere at work. The promises made unto the fathers by him who worketh at the central wheels of time are being fulfilled. We are beginning an age of glorious realization! "In the last days, saith God, I will pour out of my Spirit upon all flesh: and your young men shall see visions, and your old men shall dream dreams." Is this not evident in the marvelous correlations of law being now penetrated and forecast by the keenest, sincerest and broadest work of our youngest science, and by the slow but conscientious concessions of our older thought?

There is a marvelous principle of Balance, or Rhythmic Equipoise, at the heart-pulsations of Nature, of which we shall have later to speak, and that comes out in every advance of Beauty. In no regard is it more evident than in the tendencies of a sound conservatism with a sound progress to unify their claims in the great clearing-house of Truth, and so to establish the principle of Unity-in-Duality which is reflected in the undulations of Life's river—the ebb and flow, the rise and fall, the centripetal and centrifugal pulses of its celestial waters—that somehow serves to give them strength without arresting the onward rush of their sublime course.

Says a modern ethicist: "God is the great adjusting, equilibrating FORCE in Nature, and its existence (if provable in no other way) would

be proved by the known natural tendency of all forces to seek an equilibrium—physical, moral, emotional."

An ancient Arab inscription over a famous mosque is said to read:

"THERE IS NO CONQUEROR BUT GOD."

All talents and powers of men, all struggles and competitions of fate, longing, ambition or investigation, only accent and establish more and more clearly the universality, unity and beauty of divine principles; their necessity and consistency for the upholding or durability of any form of earthly law. Certain it is that in the marvelous dispensation foretold by the apocalyptic vision of St. John when he saw a sign in the heavens, of a Woman (emblem of the Love Power in life) who was clothed with the majesty of the sun, the tender moon beneath her feet, the resplendent stars within her crown,—that then "the Earth *helped* the woman." Her "man-child" was "to rule all nations," and "was caught up unto God and to his throne."

Is this not symbolical of that Male energy or Intellectual force of man, reïnspired by Love rather than competitive selfishness, which will ultimately "rule all nations"—perhaps before the close of this great century or second thousand years of Christian Dispensation?

A new heaven and a new earth are indeed declared to us to-day by science, and it is helping the richer life and nobler comprehension of God in his world. Nature is to be man's friend and not his foe, for it is being redeemed by a higher and broader religious perception. "Truth shall spring out of the earth," and we shall see eye to eye in the new day hastening. Many will be the magi—or seekers after truth—who must gather to the brightness of that rising. The kings of the earth, in every department of essential nobility and worth, shall bring their glory and their honor into it.

STARS TWAIN.

The Magi came, at Christmas tide,
Into the night, with gifts resplendent—
Coursers, camels, robes of pride,
Wealth of satellites dependent!
They came with pomp, they came from far—
And followed fast "The Morning Star."

Lo! in a cradle made of hay
A monarch from the Heavens lay!
Was it a King, in glory dight?
No—'t was a child—in pink and white.
It, too, had traveled, alone, from far—
And came in the arms of "The Evening Star."

Which of the twain shall we worship most?
The Star with the train and splendid host,
The star of triumph, the star of power?
Or the star that twinkled at twilight hour—
The Love Star tender? Now watch and see.
It is "The Magi" that bend the knee.

Ah! splendors of wisdom, pride and wealth;
Glories of genius, knowledge, health;
Powers of busy brain and feet—
All of the treasures of earth complete—
Spirit of Beauty and Love—at last
At thy sacred feet all crowns are cast!

GUY DE MAUPASSANT tells of a poor orphan, born blind, among the peasantry of France, whose neighbors tired of his support, and after using him as a butt for jests, left him to beg in the snow until one night he was found frozen. There is a terrible problem, of which this story stands symbol, which is ever present to our modern society. It is that we leave our own poor souls, as well as those of our lower classes, orphaned and blind from the treasures of the All-Father's house. "The heavens declare the glory of God" in astronomy, but we do not look up! "The firmament sheweth his handywork" in marvelous worlds rushing upon their geometric cycles, but we sooner gather to gamble at the race-courses of man. Time sweeps through eternities of years, marking the gigantic steps of creation, scoring the mighty evolutions of race after race, but we are engaged at watching the "ticker" of stocks. Not the rise and fall of historic dynasties but the rise and fall of trade. Till soon Death stands at the gate, beckoning the poor fool forth upon the mighty journey he has never anticipated, into the vaster seas for which he has no rudder, into that sublime transition for which he has never thought to prepare!

Let us then stop together for a minute, and take a brief but comprehensive glance into the beautiful Studio of the mighty Master-Builder,

the celestial Artist-Artisan, who is never so busy that he will not condescend to the humblest, nor so sublime in his conceptions that he will not stoop to unfold them to the meekest of his earthly children.

"The day of days," says Emerson, "the great day of the feast of life, is that in which the inward eye opens to the unity of things, to the omnipresence of Law."

"Look within!" cries the Emperor Marcus Aurelius. "Let not the peculiar *quality* of anything, nor its value, escape thee."

"The chief office of philosophy," says Whipple, "is to make the inner or hidden truths of Being practical in human life, and this it accomplishes through making the nature and laws of the finer forces applicable in men's understanding."

Christ's miracle of "opening the blind man's eyes," may, in reality, have been symbolic of a great mystery in our own comprehending and applying Nature, viz., by

1. Stooping to the *dust* of earth;
2. *Connecting* the scattered atoms, by liquid (from his lips);
3. Connecting these with human *vision* (by comprehension).

IF WE hold a rose in our hand and crumble its petals to powder, we open our hand only to discover the same quantity of dust, but the rose itself has disappeared. What was the "Rose"? Where was it? What constituted it? Ask of the true poet-artist who studied and loved it before it fled. He will perhaps take a little liquid or oil, and gathering those (or similar) pink atoms together, he will revive the spirit of the rose, because its spirit had entered his spirit, and the rose will now stand forth vitally and palpably again upon his canvas, in all its original splendor and glory!

The artist will tell you that what you saw first, and really enjoyed, was the *invisible and spiritual part* of the rose, some emanation of God himself—that took up and used the pink dust of earth to reveal an exquisite *ideal* to man. And when you had crushed and driven out that spirit, so that only idle dust lay in your hand, he, the artist, had caught that passing spirit into his own human spirit, and revived its character by restoring the atoms to the same actual or apparent relations in space that they had before occupied. And this he had had to do by comprehending and observing the same beautiful arrangements and correlations, in form and cluster, that the original petals bore. This, of course, was to him a spiritual and intellectual process (just as it must have been in the soul of God himself—the first great Artist).

Now, referring this beautiful illustration to the preceding case of Christ and the blind man, do we not see that this was just what the Master desired to symbolize and convey to history?

He stooped condescendingly to the humble atoms of our planet's dust. He touched and gathered their scattered crystals with the liquid of his eloquent lips, and bringing them to bear upon the dull vision of the blind man he caused the soul behind the eyes to comprehend the real *Relations* of things—*i. e.*, the way the dust of matter associated together and the significance forever involved in those relations.

It is to take pattern by this great Exemplar and to strive to comprehend, enjoy and reapply those wonderful Relations and Significances to all things about us, and to all things we are obliged to create commercially, that this book on Form Reasoning and Esthetic Principles is written.

Divine light is ever ready to enter from God, Heaven and Nature.

God is the Creative Spirit—everywhere in space;
Heaven is the Appreciative Spirit—everywhere in soul;
Nature is the Constructive Spirit—everywhere recording and revealing the first, and appealing to the second.

Mankind, from earliest ages, has been vitally concerned in comprehending God; developing Heaven; marveling at Nature. He was awe-struck, instinctively, at God's presence and power; he experienced joy or pain by the measure of appreciation of Heaven (or hell) within

himself; he was resistlessly fascinated and wonder-struck by the charm, splendor, beauty of Nature —that ever-present workshop in which the Divine Carpenter is forever taking men as apprentices through the mystery of his methods and principles.

On bringing together the lesson of the dust atoms, the lesson of the liquid cohesions, and the lesson of Vision, Form, Color, Texture, etc., behold A Miracle! The blind man sees and comprehends.

But what, and in what order did he see? He saw "men" (mankind—his race) "as trees" (that is, as ascending, continuous organisms, after the pattern of that tree-of-life in the midst of Paradise) "walking" (that is, progressively growing or advancing by consecutive historical and biological steps).

Now, a tree is *all* beauty. The Tree of Life that was "in the midst of the Paradise of God" (which was again symbolically compared with a "River-of-Life . . . proceeding out of the throne of God") was a consistent, continuous evolution of spiritual life, by ways embodying intellectual law. And these are interesting, instructive and inspiring, all the way along.

But it would seem that, as a tree's beauty culminates in its fruit and flowers, so the vast river-of-life or giant tree-of-life—recording divine plan and human civilization—is in these latter days hastening to ripen for us; to culminate in the highest beauty of all the process, viz., in the sublime Principles and Methods by which that progress was effected; and in the beneficent, far-seeing and sublime Motives for which they were evolved.

IGDRAZIL.

("The Tree-of-Life.")

As a leaf, trembling on its fibrous stem,
Longing to cast away restraint—be free
To sail unfettered through the highest heaven
And without check to float the upper air—
Feels the firm twig that binds it to the bough
And bends it to the enduring tree below,
Strong tree of wood from many generations formed—
So the young soul, with deep desire filled,
Would fling far, far away restricting ties
And soar amidst a world its fancies paint
All bright and fair and beautiful and good—
Where spirit craving drinks and drinks its fill.
Here, too impetuous youth is held in leash
By each relation to the Tree-of-Life (the "Igdrazil"),
Its boughs and branches reaching high to heaven;
Its fibers firm of many generations formed
Of hearts crushed earthward; hopes and fears suppressed;
Of a dull ache, scarce counted as a pain;
Of griefs which burst restraint or turn the mind;
Of joys whose moment counts a thousand years;
Of spirit glimpses showing Beauty's scope;
Of strong, true souls assailing fearful odds,
At once a failure and an aureole flame;
And others, thoughtless ones, who lived and died
Seeming to leave small record of their flight;
All, all yield vital sap to this life tree.
Thus Igdrazil, on high, resistless towers
With soaring boughs; with roots still deeply set;
With life-sap drawn from countless human souls.
So grows the Tree—on, on, beyond our ken.

—*Mira B. Edson.*

IN THIS book we will try to note the latent ideals that lurked within the early germs; the sturdy, rigid, crystalline truths and energies that supported the structural root and stalk; the enveloping and environing conditions of brooding and pregnant Motherhood, that bent over and developed the nascent lives; and lastly, the magnificent florescence of grace and charm in form, color, fragrance and immortal fertilization, by which Life's fruit is gathered in reviving principles—capable of infinite and diversified application.

St. John added, of this tree-of-life, that its "leaves were for the healing of the nations." Perhaps, as Nature unrolls her sibylline leaves, and shows modern man the mighty scroll of process by which she has attained her purpose, the mind of man itself will grow orderly and joyously constructive, in sympathy with his Divine Mother. A clearer head will aid a nobler heart and wholesomer body; and in her sacred leaves, or periods of transition, we shall indeed be subject to a broadening and beneficent mind-cure that will stoop to bless the humblest body of society, while equally effective to engage and inspire its heart, imagination and faith.

There must be harmony and proportion between these provinces of being—these realms of physical, intellectual and moral life.

Beecher said: "The progress of man is from sensuousness to intellection, and from intellection

to imagination—the highest attainment of imagination being the attainment of faith in God."

So editor B. O. Flower says: "The age of brawn failed to give man peace or happiness. The age of intellectual supremacy has likewise failed to satisfy the craving of the human soul. The next step will be into the domain of ethics, where justice, freedom and fraternity will be taken in their broadest significance. The soul must blossom with the brain. All lives imbued with the thought of the age, all brains made luminous with love, must place their chaplets on the altar of utility. In the ushering in of this new order we must summon all that makes for beauty, nobility and unfoldment in art, music and song."

And Sylvester Baxter adds: "Our system of government, of administering justice, of national education, and our whole social and moral organization, when compared with our wonderful progress in physical science, remains in barbarism. Until there is more general recognition of this failure, resulting from neglect to train and develop more thoroughly the sympathetic feelings and moral faculties, we shall never attain real superiority over savages."

TO OPEN, then, the blind eyes; to grasp the constructive and harmonic laws of Beauty; to catch the heavenly principles of the Celestial Artificer; to feel the inspiration of his Holy Spirit; and to convert all these to the healing of society, the uplifting of the producer, and permanent enhancement of values to all things so produced—this should be our noble task. Some one has said: "The use of Beauty is to make us freemen."

Without these sacred candelabra of guiding inspiration, man's labor is but a pathetic patchwork of broken and fragmentary hope; with out these central foci, his blind and staggering orbit is that of a wandering star amid the heavenly hosts of order, symmetry and design. In the noble words of the poet Markham:

"Leave the dead altars where the blind souls kneel:
The road I take into the ages dim
Is strewn with light from Beauty's vivid wheel,
And whispers with the feet of cherubim.

The old song passes and the new song breaks!—
The song of tools, the song of common man.
The road is Brotherhood—the new time takes,
The rallying cry is, *Christ the Artisan!*"

Breughel, Pinx.

"THE BLIND LEADING THE BLIND"

CHAPTER II.

SPIRIT UNIVERSAL

"COME, lean an ear, an earnest ear,
To Nature's breast, some stilly eve,
And you shall hear, shall surely hear
The Carpenter, and shall believe;
Shall surely hear, shall hear for aye, who will,
The patient strokes of Christ resounding still."

—*Joaquin Miller.*

THE BREATH OF GOD REVEALED

THE HUMAN FORM is not merely beautiful in itself and for itself, on the side of its admirable grace, proportion, and structure (as seen in even a silent figure or statue) but exactly as a drooping flag catches the wind and reveals its own beauty the better by unfurling, so it reveals the wind —the invisible Breath of God—and shows the latter's direction and character.

This universal invisible Spirit-Force is shown forth visibly to man by means of the material atoms it plays upon and plays with, so that not only do we know the Creator by the beautiful forms he creates, but by the marvelous grace and play of such endless reärrangements and accompanying movements.

Correggio, Pinx.

ST. JOHN EVANGELIST, WITH EAGLE'S QUILL

OPENING CONSIDERATIONS

"Speak to the Earth, and it shall Teach thee."—JOB

WE ENTER our existence upon this planet miraculous germs of spiritual life, with wonderful instincts of discernment and affinity for the central source of Reason, Love, Delight, from which we came, and of which we are mysteriously the expression.

But, normally drawn to seek and delight in happiness, we are at first unconscious of its conditions, or the physical, mental and moral departments of Life through which it plays. We are ignorant of Life's stupendous reach and circumscription. We learn only by experience, tradition, intuition or revelation, the splendor of our inheritance, the scope of our reciprocal obligations.

For character and immortal happiness, far more than merely for physical or temporal pleasure, man's true victory is the discernment and application of those overruling Principles and Methods (in physical, ethical, or esthetical departments) which establishes healthy operation for his body, morals and constructive mind.

The lower animals enjoy health that comes from primitive instincts of obedience to these natural laws. The higher animals, though below man, add to this an intelligent delight in conscious Mind, as where dogs enjoy comprehending and coöperating in their master's purpose—say in gathering flocks or hunting game.

In some of the more imaginative and constructive birds and beasts there is delight even in art and in rudimentary beauty, as where the bower-bird weaves a bower-promenade for his love and decorates it with pleasant shells or colored objects.

But, supremely over all, the idealizing and emotional powers of man raise him above such fellow-creatures and place him among the gods. Especially is this true of his spiritual faculty for perceiving and applying abstract principles of life—originally and constructively—as though in the very footsteps of God.

It is to these higher faculties of the reader, rather than to his lower animal or purely imitative powers, that our book appeals.

PHILOSOPHY has ever attempted to record the drift of those vital principles it perceived (though at times somewhat narrowly and intellectually) from the head alone, but at other times more broadly from the heart, and finally in the life itself and the art of life.

Thus, as a strictly intellectual Greek, Aristotle too closely confined philosophy to the soul's power of perception and contemplation, in his dictum: "Philosophy is the science which considers Truth"; as did the modern philosopher Cousin, when adding to this the soul's power of description and record, in: "True philosophy merely establishes and describes what *is*."

But Cicero had gone closer to the word's formation and spirit (philo-sophia) in adding more of the soul's affection for good, in his words: "Philosophy, if rightly defined, is the *Love* of wisdom;" which Voltaire strengthens by: "The discovery of what is true, and the practice of what is good, are the most important objects of philosophy."

This brings forward both mind and heart to the practice or "art" of good and truthful living—even as Plutarch had in the words: "Philosophy is the Art of living;" and as Seneca had in: "Philosophy is both the law and art of life; it teaches what to *do* in all cases."

But now the sad fact remained that man did not always do what he knew to be right, so that Shaftesbury adds: "It is not the head merely, but a heart and resolution which constitute the real philosopher." And at last our own Thoreau defines it *vitally*, in life itself, by the words: "Philosophy is so to love wisdom as to *live* according to its dictates."

Thus we are finally driven to the query: What *is* wisdom that we must perceive, record, love, will and live her? And to answer this best, we hearken to the mighty voice of inspiration in the mouth of that greatest philosopher of all time, King Solomon of Israel:

"Get wisdom, get understanding; . . .

A CROWN OF BEAUTY

shall she deliver to thee. . . . The Lord possessed me [Wisdom] in the beginning of his Way, before his works of old. . . . When he established the heavens, I was there: . . . Then I was by him, as

A MASTER WORKMAN."

THUS we see that true philosophy is not only the perception, record, love and resolution to live truth and goodness, but that Wisdom herself is the *spirit to understand the way of the Lord in such degree as to coöperate constructively and tangibly in it* as Master Workmen that we may be crowned eternally with the crown of the glory of God's Beauty transmitted through us.

So that, indeed, true victory and true greatness, alike for one's own life, as for that of others, is not the enhancement merely of our wonder and delight at the Divine Finger as it moves through time and space, carving its miracles of form or painting the splendors of its palette; nor even the power and riches acquired thereby on earth; but rather the permanent touch, the comprehension, sympathy and desire with which, henceforth, we *live in harmony with* the Master Mind and *join constructively* in the works of the greatest Artist-Artisan.

Now philosophy conveniently subdivides her labors, so that while it is the aim of the science of physics to disclose those principles and laws which conduce to man's physical well-being, it is the science of ethics to reveal those which advance his moral growth and character; but the science of esthetics (or science of Beauty) is to correlate all these. It is to commend the celestial methods and principles of Collective Harmony, by which God seems to move in making his handiwork significant, poetic and glorious on the side of well-proportioned and balanced Taste; with the spirit, grace, fascinating charm, inspiration and poetic meaning which he reveals throughout nature, his interesting workshop.

In brief, and with perhaps bolder grasp, we should claim that abstract and absolute Beauty extends her mighty wing over every department of creative plan or constructive life (divine or human) in proportion as immortal and celestial principles retain their sway. And the sincerest physicist will find beauty as truly in the perfect adjustments and workings of physical forces as the moralist will in the perfect character, or the musician and painter will in the nightingale, lily, or rose.

It is a difference in degree rather than in kind. Thus Browning sings:

"I but open my eyes, and perfection, no more and no less
In the kind I imagined, full fronts me; and God is seen God
In the star, in the stone, in the flesh, in the soul, in the clod."

And still another later writer exclaims: "We are surrounded by a shoreless and fenceless world of beauty and spirituality; and art—whether in color, stone, sound or words—is simply its translation, more or less imperfect. *All art is Expression.* Poetry, Painting, Music, Architecture, etc., are only so many beautiful roads to the Most High. Successful workers in them must, one and all, possess what the Bible calls Open Vision. Such must be both seers and interpreters of that Spirit which lives behind things and life, and which gives them vitality, meaning and charm. Why do we delight in Life and all her children? Because one and all suggest that Presence back of things."

So Washington Irving wrote: "It is the divinity within that makes the divinity without."

THIS mighty Life that breathes, pulsates and compels behind and within and between the static dust of matter, and that uses matter as its agent to convey its mystic movements, its beautiful meanings, does so by the peculiar arrangements and significances of the atoms of earth, just as a writer or draughtsman expresses his intents, feelings and conceptions of soul by arranging the atoms of ink or lead into letters and pictures.

But we have to learn to read his language. If we recognize only chaotic ink-blots on the page, we imply lack of mind or meaning, of intellect or intent, in the writer. If we see letters and words correctly formed but unrelated, we imply perhaps a mind but not an intelligent thinker. If we decipher a connected thought or perhaps a profound purpose, but unrelated to us individually and uninspiring to us practically, we might conceive a noble author or (in nature) a divine Creator; but when we find intelligent Order in connected and consistent Process, combined with splendor of moral Purpose, conveying immortal principles and methods expressing wisdom, love, beauty and poetic inspiration, in boundless, fathomless store to every individual in the whole and to the whole in every individual, then we worship the Master Mind, the universal Friend and Parent, the celestial Poet-Artist.

"There is a Beyond!" exclaims the famous philologist Max Müller, "and he who has once caught a glance of it is like a man who has once gazed at the sun—wherever he looks he sees its image. Speak to him of finite things and he will tell you that the finite is impossible without the infinite; speak to him of death and he will call it birth; speak to him of time and he will call it the shadow of eternity."

This deepest underlying consciousness, inner vision and inspiration, has never been absent from the greatest seers, philosophers, poets, artists, however limited by personal or local incompleteness. Indeed the Divine Spirit seems to work itself out and to color the pure whiteness of its own absolute perfection by the very human qualifications or material modifications through which it reveals its purpose on earth. A beautiful collateral law is seen in physics, where, through the irregular interstices of trees, the sun's disk ever falls in golden circles upon the ground, no matter how peculiar the shape of the interstice.

Humbolt writes: "Natural objects, even when making no claim to beauty, excite the feelings and imagination. Nature pleases, attracts, delights because it is nature. We recognize in it infinite Power."

And the poet Emerson sensitively explains:

"Let me go where I will
I hear a sky-born Music still!
It sounds from all things old,
It sounds from all things young,
From all that's fair—from all that's foul—
Peals out a cheerful Song!
It is not only in the rose,
It is not only in the bird,
Not only where the rainbow glows
Nor in the song of woman heard—
But in the darkest, meanest things
There's alway, alway—Something *sings!*"

They here recognize not merely that "Immanence of Deity," that omnipresence of the Great Spirit, of which the Buddhist dreamed and the Hebrew psalmist sang—

"If I take the wings of the morning,
And dwell in the uttermost parts . . .
Even there shall thy hand lead me."

—but something vaster and more mysterious still, as conveying that steady conquest, that ultimate victory of the Great Spirit over transitional phases of advance, which (imperfectly comprehended by man) seem adverse, or situations so apparently incomplete that absolute beauty is not yet exemplified therein. Seen from an archangel's point of view, a flying dragon of preadamite days might still seem weirdly beautiful in its dramatic adaptations and personifications of primeval force; and it is doubtless these biological influences in oriental brain that makes the latter still wring such decorative splendors from those primitive agents, which (to man advanced and humanized) become outworn and obsolete. David had intimated this thought in his poetic stanza above, by the words:

"If I make my bed in hell,
Behold, thou art there."

THUS, with humility and wonder, combined with strange courage, we dare press on through the uplifting veil of mystery and glory that surrounds our little planet, well knowing in some intuitive way that the very blemish of the imperfect leaf reveals more clearly the elements of perfection in the completed one (if only by contrast and opposition); and the repulsion we feel from ugliness becomes the measure of our affinity for the beautiful.

It is intensely interesting, therefore, to note how persistently in all ages and departments of ennobled life this Immortal Presence and its principles beat in upon the consciousness of the grandest characters and workers, as the well-spring of their inspiration, influence and courage.

The Roman philosopher, Seneca, exclaims: "If any one gave you a few acres or a house bright with marble, its roof beautifully painted with colors and gilding, you would call it no small benefit. Can you deny the benefit of the boundless extent of earth? God has built you a mansion that fears no fire, covered with a roof that variously glitters by day and night! We have implanted in us the seed of all the ages—of all the arts—and God our master leads forth our intellects from obscurity."

The eminent scientist, Lubbock, similarly writes: "The world we live in is a fairyland of exquisite beauty! Our very existence is a miracle in itself, yet few of us enjoy, and none appreciate, fully, the beauties and wonders which surround us. Nature loves those who love her, and richly rewards them with the best things of this world,—bright and happy thoughts, contentment and peace of mind."

Kindling to the same thought, the poet Wordsworth sings:

"Nature never did betray
The heart that loved her,—'tis her privilege
Thro' all the years of this our life, to lead
From joy to joy; for she can so inform
The mind that is within us, so impress
With quietness of beauty; and so feed
With lofty thoughts, that neither evil tongues,
Rash judgments, nor the sneers of selfish men,
Nor greetings where no kindness is, nor all
The dreary intercourse of daily life
Shall e'er prevail against us nor disturb
Our cheerful faith that all which we behold
Is full of blessings.
. . . . . .
To every form of being is assigned
An Active Principle, howsoe'er removed
From sight and observation. It subsists
In all things; in all nature; in the stars
Of azure heaven; in the pebbly stone,
In moving waters and the invisible air!

Spirit that knows no isolated spot,
No chasm, no solitude—from link to link
It circulates—the soul of all the worlds."

Goethe says: "Nature is the living visible garment of God. There is no trifling with her. She is always true, grave, severe, always in the right. The faults and errors are ours. She defies incompetency but reveals her secrets to the competent, truthful, pure."

Juvenal writes: "Nature and wisdom always say the same thing"; which Galileo echoes in, "The laws of nature are the thoughts of God"; and Cowper clarifies by, "Nature is but a name for an effect whose cause is God."

Novalis, hearing the universal Spirit tenderly singing, says: "Nature is an Æolian harp, a musical instrument whose tones are the reëcho of higher strings within us." And Percival enthusiastically cries: "The world is full of poetry. The air is living with its spirit! The waves dance to the music of its melodies, and sparkle to its brightness." While, more exquisitely still, Richter insists: "There are so many tender and holy emotions flying about in the inward world, which, like angels, can never assume the body of an outward act—so many rich and lovely flowers spring up that bear no seed, that it is a happiness that poetry was invented which receives all these spirits, the perfume of all these flowers."

Here we note that this sensitiveness of spiritual ear, this "open vision," is caught up and given the name of poetry by him whose art is rhythm. But it runs synonymously through all the arts, for Fuller writes: "Poetry is music in words, music is poetry in sound." Macaulay puts it: "Poetry is the art of doing by words what the painter does by colors." Chapin seeing it in the sincerities of the heart, says: "Poetry is the utterance of deep and heartfelt truth. The poet is very near the oracle." Along which conviction Joubert was feeling in: "You arrive at truth through poetry, I arrive at poetry through truth"; and Plato when he adds: "Poetry comes nearer truth than history."

To the unity of all these with the good and the beautiful, Coleridge evidently refers in his confession: "Poetry has been to me its own exceeding great reward. It has given me the habit of wishing to discover the good and beautiful in *all* that surrounds me." While Bailey adds to its comprehensiveness that spirit of sacred communion and inspiration that gives the final spark, the sacred flame, which is the evidence of a living power: "Poetry is a thing of God! He made his prophets poets. The more we feel of poesy the more we become like God in love and power!"

THUS we are driven, with philosopher, poet, priest, musician, painter, sculptor, architect, and even with the humblest human heart (for André claims, "Every man that suffers is a poet; every tear a verse; every heart a poem,") into the inner penetralia where Spirit Universal dwells, and recognize that out of a central sun there radiates a light whose rays and colors are variously baptized by man, but whose inner essence is ever one and harmonious, portals of the same celestial city, facets of the same celestial diamond.

It is when the soul becomes conscious of the harmonic nature of any thought, wish, or act, with those that flame and burn at the central Heart of the universe; or when the mind grasps the symphonic progress of these movements along the same vital and spiritual principles guiding the whole; or when the eye beholds their living presence in the perfection of any constructed forms, sounds, colors, etc., that the delight experienced by sensitive and wholesome characters is given the name of Beauty.

It is probable, also, that whatever sensitizes the soul on one side toward beauty may attune it so much the more to voices whispering on another side. And quite possible that it is passed, as a benediction, to families or races that receive its commission. Though, even then, a spiritual affinity seems predicated, and, I believe it will be found more accurately *a transmission from spirit to spirit*, whenever and wherever responsive chords are touched and mystic *living* connections opened. We have all experienced this strange vitalization and impregnation from true geniuses, and when least expecting, perhaps, but where by reason of

improved and heightened sensitiveness we were most receptive and impressionable.

Certain it is, as Michael Angelo well put it, "God did not make us to abandon us." His Spirit bloweth where it listeth, we cannot tell whence it will come or whither it will bear us onward. But sure we may be, that if we await its call, it will appear betimes to guide and inspire. And it will come from every point of the compass and from every living thing that bears its thrilling impress or vital impersonation!

THE SPIRIT'S HOUR.

My mocking-bird full oft, at vesper twilight still,
Croons in a low refrain to south winds soughing by,
And tunes his glowing throat to echo back each trill
From far-off fading notes of warblers in the sky.
When every murmuring chord has sunk beneath my reach
He sits, alert there still, himself the sound to teach.

So with that still, small Voice that broods o'er poet's soul,
So sacred, sweet and low—mysteriously shy!
Ye cannot catch Its call—nor hear the chariot roll
When fanning seraph wings and thundering hosts go by,
Except, in holy tryst, ye wait,—nor deaf, nor blind,—
Like weird Æolian harp wooed by the whispering wind.

Then breathes the hallowed spell that haunted Orleans' Maid;
The trump that summoned Troy; the sibyl leaves for Rome!
Then drops the Manna Dew; then breaks the Mystic Bread,
While thousand souls are fed that to the Master come!
Then John on Patmos hears—then Paul by wayside sees
The Heavenly-Light of Life—while fainting to their knees!

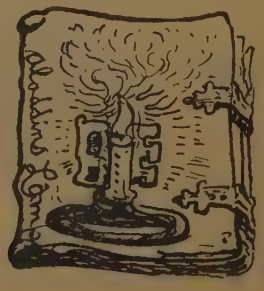
In this great sense we cannot take up this theme of thought unless we put the best of our human nature in touch with the best of what is cosmic nature. "God is a Spirit" and they that study his workings in divine, natural, or human art, must study him in spirit as well as in truth. We must be as receptive as analytic. In no quarter of life is it more true that spiritual things must be spiritually discerned. But we have the additional encouragement of the true seeker and seer that "He that is joined unto the Lord is One Spirit." "He is not far from every one of us." That is, that if we put ourselves *en rapport* with nature and its sublime Author, he will not abandon us (as Michael Angelo nobly assures, or as a greater Master than he exclaims: "I will not leave you comfortless: I will come to you.")

"The Spirit searcheth all things, yea, the deep things of God," and though the brutish men comprehend them not, for they regard not his works neither the operations of his hands, yet, "Day unto day uttereth speech, and night unto night sheweth knowledge." "The invisible things of him . . . are clearly seen, being understood by the things that are made, even his eternal power and Godhead."

The great Hebraic poets went further, and saw clearly that His works were his thoughts toward man. David cries: "Many, O Lord my God, are thy wonderful works . . . and thy thoughts which are to us-ward." "O Lord, how great are thy works, and thy thoughts are very deep!"

And in this sense they become not mere repositories of counsel but absolute necessities of life to us, which we ignore at our peril. The command is clearly "Man shall not live by bread alone, but by every word that proceedeth out of the mouth of God." And long before the voice and writings of man were known to earth, Nature herself had become a prior "Word" or Bible (*biblos*), when, as the Psalmist said, in the beginning "He spake, . . . and it [Nature] stood fast"; or "Thou sendest forth thy Spirit; they [the things of Nature] are created."

We turn to her, then, as God's first and cosmic language of revelation, and as the first and largest book—in which all else is included.



CHAPTER III.

THE SCIENCE OF BEAUTY

OLDEN HYMNE

"THE ſavage Wilderneſs remote
Shall hear *Thy Works* and *Wonders* ſung!
So from the Rock that Moſes ſmote
The Fountain of the Deſart ſprung.

Soon ſhall the ſlumbering Morn awake,
From wandering Stars of Errour Freed,
When Chriſt the Bread of Heaven ſhall break
For Saints that own a common Creed.

The Walls that fence His flocks apart
Shall crack and crumble in Decay,
And every Tongue and every Heart
Shall welcome in the new-born Day.

Then ſhall His glorious Church rejoice
His Work of Promiſe to recall—
One ſheltering Fold, one Shepherd's Voice,
One God and Father over all!"

"I BELIEVE that the Happiness of

The ETERNAL LIFE,

which is the ATTRIBUTE OF DEITY, consists in his knowledge of all things—for without knowledge and understanding, Immortality would not be Life, but merely duration. Wherefore, the

PURSUIT OF TRUTH,

especially with reference to the BEING OF DEITY, is the pursuit of Holiness; it is a desire which in learning and enquiring becomes as it were

AN ADORATION OF DEITY;

it is a service which is far holier than any form of abstinence or temple worship and is particularly pleasing to DEITY because he himself is

WISDOM AND PHILOSOPHY."

—*Plutarch.*

WOUNDED LIONESS, ANTIQUE RELIEF, PALACE OF ASSURBANIPAL, ASSYRIA

SPIRIT EXPRESSIONAL

THE IDEAL

SPEAKING of the inherent powers of the Ideal, a clear modern metaphysician says: "Exclude not the Spirit that gives life, nor Beauty which has vast bearing on life.

"Idealism is *spiritual bias* in every age. The ideal is older than history. We work from ideals to externals. Thought precedes and conditions action. Inner faculty begets outer function. The members of the body are correspondences (as known to Swedenborg), their functions symbolical of spiritual office; ear and eye of inner vision; hands and feet of certain faculties; sex of the creative principle. Five senses will not suffice, we must have more universal mediums or be left behind. Gravity carries freight; moonshine floats ships; liquid air and X-rays reveal new energies. Control of thought shall disclose vast spiritual dynamics. Science demonstrates telepathy.

"The intuition of idealist becomes corroborated by chemist analyzing the blood under various emotions, and lo! *chemical products for each emotion.* The idealist has become more practical than we. Strictly speaking, all men are idealists—the difference is in their ideals. What we believe to be best is our ideal—our inspiration or damning limit. Vulgar ideals make vulgar people. Consecration of thought to transcendent ideals makes poets and seers. The materialist is the man of material ideals.

"Growth is the uncovering of what *is*, not the accretions from without. Sanity is not conformity to custom, but what is accordant with Truth. Out-and-out sanity is parallelism with Truth. The

advance movement of each age is great Idealism. Where its roots reach there is the ground stirred to new life and activity."

Solomon explains: "Where there is no vision the people perish."

And on this text the modern Hebrew leader, Nordau, asserts that: "The world is perishing for want of ideals. Humanity may not realize what is wrong, but this total absence of the ideal is the cause of a moral scourge that subtly dries up the marrow of life. With all abundance of wealth there is no ideal! The world, in its last stage, *counsels gross brutal selfishness under polite manners and stereotyped elegance.* Idealism is the mighty impulse to heroism and the nation's salvation. Eager aspiration, loving hope, deep consciousness of great commission, points ever onward and guarantees the future to nation or individual. The ideal of the three kings who traveled to Bethlehem is the only healthy one—ever follow the Star—thus alone can we progress."

So the Canon of Worcester, England, writes: "Real artists have ever been idealists, they have worked *from within*, from their own souls; they could put aside the purely accidental and transitory and bring out the eternal. The great Greeks: Sophocles, Plato, Phidias; the Italians: Francia, Perugino, Raphael, Angelo, worked from within. You always find genius working out from eternity. You find the triumph of the ideal. Idealism in art *is reality.* Realism (external literalism) is falsity and caricature."

We said that, in watching the tree or plant unfold, nature compels us to recognize an ideal *latent* in every seed, and seeking its full self-expression. That this is typical of the greater Tree-of-Life must be equally true—though the mighty Master reserves to himself the splendor of its final manifestation. Still it is not only permitted us, but commanded us, to watch his steps and the intimations of his coming. "Prove all things; hold fast that which is good," is his charge. "Whatsoever things are lovely, . . . of good report; . . . think on these things." "It is God which worketh in you."

After centuries of anxious research the nobler intelligence of the race, crystallizing in advanced physical, ethical and esthetic science, is conceding a moral Purpose and sublime Order throughout creation. Step by step and stage by stage are being detected a marvelous Plan, admirable Method, and the mysterious spirit or Essence we term Beauty—as present in her purpose, progress and attainment. The latent beauty of divine ideals is ever present all along this way, as incentives, concomitants and resultants of force, whether seen in the early realms of mineral, vegetable or animal character (where gem, shell, flower, bird and beast delight and fascinate us) or in higher and later realms of human thought and feeling (where man's art follows nature's as nature's followed God's).

WE SEE to-day that all cosmos is a work of Art in the broadest sense. Not merely because it is expressive and constructive, but because it expresses and constructs by *intelligent* plans, principles and methods. One may build a shed of planks that would shunt off rain, or a pig-sty to pen in vitality, without yet building a work of art. We see about us such monstrosities. But the Creator does not so build. Look into the exquisite framework, spirit and style of every flower, butterfly or bird. He constructs with artistic taste, with intelligent proportions, esthetic harmonies, ethical ideals. His work is mechanically and mathematically perfect for function; esthetically charming for taste and beauty; ethically consistent for moral purpose. Constancy of type and constancy of formative law show him ever close behind the veil of sense, busily at work. Eternal principles of Unity, Balance, Proportion, Symmetry, Harmony, Adaptation to use, Interpretation to spirit and character, Transmutation to progress, reveal majestic lines of general structure, organic evolution and marvelous Variety-in-Unity, which give the seal of the ideal to the works of his hand, mind and heart.

Thus the Creator is forever teaching us that he himself is, somehow, a Unity that is universal; a Duality that is active in delicate equilibrium and

balance, which, by static and dynamic force gives rise and fall, repose and action, center and orbit, individuality and generality, to all that is. But still more is he a strange Tri-unity, through attributes of Law, Love and Grace; Truth, Goodness and Beauty (their emanations); Science, Religion and Art (their cultures); Wise Judgment, Good-Will, Refined Taste (their daily practical virtues).

Science, in the strictest sense, searches the Creator's Truth, his law and authority in matter.. Religion most properly prefers to manifest his Love in vital example, self-sacrifice, practical charity. But Art, most like the gentle dove symbolic of his gracious Spirit, emphasizes the attractiveness and tenderness of God; nestles to the lips of his sympathies; hovers in the aureole of his crown; heralds his coming glory and beauty in every opening lily or awakening rose. Spreading its pure wings over the dark waters of life, it seeks and finds our lost Ideals, bears to us the poet's branch of hope, the talisman of immortality; or like the Æolian harp attuned by tightening cords (even of suffering and abnegation) renders us more sensitive to every whisper of the Spirit's voice or passing touch of the Divine finger!

THERE must, of course, be a correlated perfection which will embrace all these sciences in a loftier one that will become the truest adoration, and hence today the foremost thought is looking eagerly for the harmonic union of a true Science, true Religion and true Art in one noble whole, that shall stand forth eternally, like those three symbolic Graces of Grecian times, with arms affectionately intertwined.

In the words of Prof. John Fiske: "What is the grand lesson taught by the correlation of forces, the spectrum, chemistry, astronomy, paleontology? It is the lesson of the Unity of Nature. Nothing could be left out, without reducing the whole to chaos. In all this multifariousness there is One Single Principle at work tending toward an End involved in the Beginning."

The famous French critic, Viollet le Duc, says: "Philosophically considered art is an indivisible Unity like reason and morality. Institutions vary, but three faculties of acting intelligently, teaching morality and appreciating art are *peculiar to man.* She is a fount of instructive emotion reaching the soul by various channels. Orator, poet, musician, architect, sculptor, painter, etc., may each utter the same sentiments and arouse the same emotions. Natural phenomena produce in our mind, through the senses, impressions quite different from their physical effect—a perfume may recall a person or event, because intimate relations are established between the senses and the imagination. The murmur of the sea or wind, rise or set of sun, obscurity or light, awaken moral sensations or elevations of thought we term poetic. The grand harmony rouses the dormant sentiment of the soul! Like conscience, the ideal is ever latent and must be lovingly cared for. It must ever be developed by the same way. Its principles proceed from the imagination and must be expressed through nature by knowing her secrets, not being her slave. They are the same for all time; every branch will exercise similar power; there is intimate relation between them; and no nature is truly artistic which does not appreciate *all.* Epochs so favored must be considered the most precious in the history of mind."

With similar clarity Fuseli remarks: "Such is the influence of the arts on society, sentiments and commodities, that we are entitled to estimate nations by their standard. None have long survived in the love and reverence of mankind which have not given birth to great artists,—whether poets, painters, composers, sculptors, architects or other. A genuine perception of beauty is the highest education."

One of our own government reports eloquently confesses: "It is a narrow and primitive education which sends us into the struggle of life maimed and blind. Having eyes we see not, and having hands can not handle the very implements by which we must rise. Lisping in limited and local dialects we are dumb to the universal language of nature. What eloquent words have been uttered over him who had learned to read, but into what august Presence is he invited from whose eyes the scales have fallen, who has learned the exhaustless beauty in the works of the Divine Artist. This is the vestibule of the grander tem-

ple opening to the works of nature and man. Compelling the eye to observation, a new creation opens to the heedless. Form is apprehended, and lo! a new heaven and earth. Nature is now vocal with tell-tale hues, clouds speak in tender or threatening tones, skies appeal by day and night, spring whispers her coming, life can never be ignoble—man is free to her boundless domain!"

IN STILL more beautiful language the Indian Veda notices this affiliation between the soul of man and his Creator: "Nature, the human mother, has sympathy with all her children. All smiles and blushes at dawn, she wakens the young and joyous, and with them wonders and hopes. On the bold and ardent she flashes hotly at noon. She dreams with the languid at twilight hour. At night she steps up to the mourner and puts her face down quite near to his. She touches his strained heart, and lo! it overflows. She lays her shadowy hand upon his aching eyes, she wraps him tenderly in her dark arms and silently bending over him gives him the consolation of tears."

Mr. Emerson adds: "Without the great arts that speak to his sense of beauty, man seems to me a poor, naked, shivering creature!"

Indeed, then, man becomes lower than the brutes, for in their humble realm, instinct substitutes responsibility, and they are mutely obedient to instinct. But in the realm of freedom and responsibility it is at man's peril that he neglects or despises Vital Principles—of beauty or other. They are forces like gravity and magnetism with which he must count forever—for evil or good.

Man has been defined as "a thinking, talking and constructing animal. Other animals may partake with him of thought, and in construction and speech he may merely be more advanced than they, but in the idealizing and emotional faculties which make his art capacity, including his appreciation and enjoyment of beauty, he stands most clearly their superior. Art is, then, the strongest evidence, outside revelation, of something other than animal in man."

As a spiritual essence incorporate in mind and matter, Beauty is a concomitant of every wholesome growth, an organic need of every natural life. Man is alike receptive and creative, and as his art is the expression of some idea, object or emotion, conceived, perceived or felt by him with sufficient power to arouse a like impression in others, and as something of his personality must adhere, so his art must become beautiful and durable, or ugly and ephemeral, as it harmonizes with underlying principles of beauty.

Fuseli claims that the benign influence of art diminishes or spreads as its source—a sense of beauty—flows through scant or ample vein, clear or turbid channel. As taste is adulterated, ornament grows meager, clumsy, barbarous, ludicrous; affectation dictates, simplicity and elegance get overloaded; novelty and error go hand in hand. And Le Duc adds to this that a true renaissance has never arisen from corrupted types, and that only primitive sources can furnish the energy for a long career.

To such testimony we ought to unite Ruskin's strong sentence: "There is no branch of human work whose laws have not a close analogy with those that govern every mode of man's exertion. As we reduce to certainty any group, we find them passing analogy and becoming the actual expression of some ultimate fiber of mighty Law that governs the Universe. However inconsiderable the act, there is something in the well doing of it allied to the noblest forms of virtue. Truth, Decision, Temperance, honorable conditions of spiritual being, have derivative influence over works of hand or acts of intellect."

And Lafcadio Hearn closes for us this deep recognition of vital underlying Harmony in his suggestive remark upon Greek sculpture: "The nudity which is divine, which is the abstract of beauty absolute, gives the beholder a shock of astonishment and delight not unmixed with melancholy. The longer one looks, the more the wonder grows, since there appears no line whose beauty does not pass all remembrance! So the secret of such art was long thought to be supernatural, and in very truth the sense of beauty it communicates is *more than human.* It resembles the first shock of love. Plato explained the shock of beauty as the soul's sudden half-remembrance of

the world of Divine Ideas. The human ideal, expressed in such art, appeals surely to the experience of all that past enshrined in the emotional life."

Art, then, as Hegel intimates in his Æsthetik, "Fulfills its highest mission when it has thus established itself with religion and philosophy in The One Circle *common to all*, and is merely a method of revealing the godlike to man; of giving utterance to the deepest interest, the most comprehensive truths. For, in their art works, nations have deposited their holiest, richest, intensest ideas; and, for the understanding of their philosophy and religion, art is almost the only key we can attain."

On this theme Max Müller points out that: "What we call religion would never have sprung from fear alone. Religion is trust, and that trust arose in the beginning from the impression made on the mind and heart of man by the Order and Wisdom of Nature; and practically by those regularly recurrent events, the return of the sun, the revival of the moon, the order of the seasons, the law of cause and effect, gradually discovered in all things and traced back in the end to a Cause-of-causes."

"The ancient religions," says Crane, "are symbols of the forces of nature evolved from, perhaps, some common type through endless modifications—a natural mythology common to all. Religion transformed becomes poetry; heroic shapes personify psychical and moral forces; lesser personalities are rolled into greater; greater are lost in types; events are generalized; the image of past experience of the race upon the general mind becomes generic like that of visual impressions in the individual. It is the natural tendency of the human mind which gives figurative art its importance. Expression is the clay on which it works; imagination is the creative force; a sense of beauty is its controlling power. In the natural world we find constructive strength united with beauty, and fitness governed by adaptability to circumstance. Structural necessities lend themselves naturally to design and are universally pleasing. Both in life and art Beauty *is not something accidental*, it is an *organic* thing having its own laws, its own logical causes and consequences. It is A Living Force, A Living Presence, and therefore ever varying in its forms, as we follow it down this stream of time and mark its habitation from age to age."

Finally, in arranging our conception and study of beauty and its arts, within that One-Circle-of-Thought, which is symbolic of the soul's outlook on life, we may summarize all the preceding by the tenet of Delsarte: "The object of art is to crystallize Emotion into Thought and then fix it in Form." Or, taking the finer simile of Christ (who always taught by parables—*i. e.*, artistic symbols), Art is the miraculous "transformation" of the pure water of Truth into the warm wine of Love or emotion, and the making of it play and sparkle through the varied facets of the crystal goblet of Grace, Inspiration and Charm, in which each Pentecostal beholder receives it through "his own language," but by the same constant and pervasive principles and methods of ETERNAL BEAUTY.

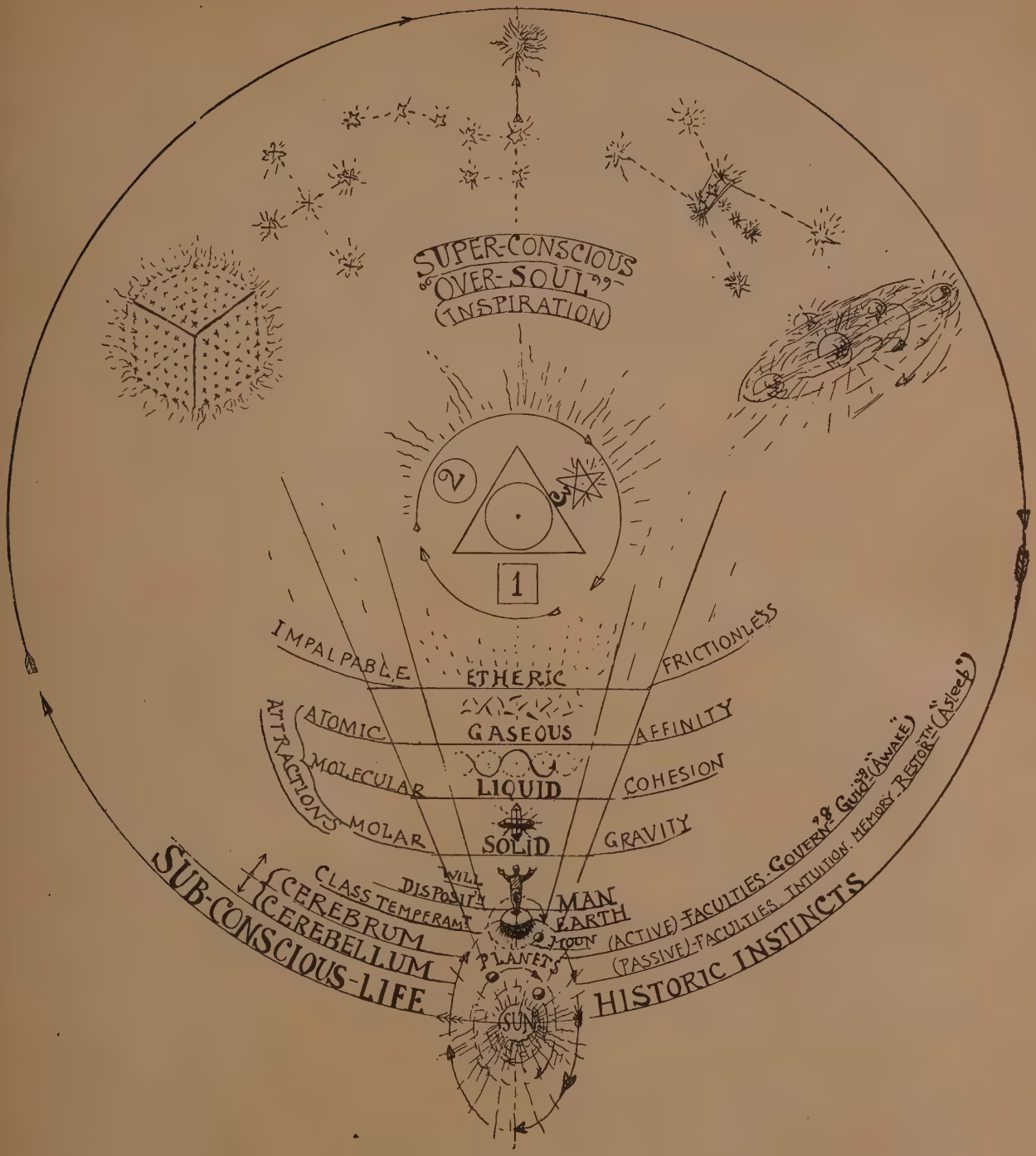
CHAPTER IV.

UNSEEN HANDS

"Turn your ear
To all the wordless music of the stars
And to the Voice of Nature, and your heart
Shall turn to Truth and Goodness as the plant
Turns to the sun. A thousand Unseen Hands
Reach down to help you to their peace-crowned heights,
And all the forces of the firmament
Shall fortify your strength. Be not afraid
To thrust aside half-truths and grasp the Whole."

—E. W. Wilcox.

The Riddle of the Sphinx



ATOMIC LADDER-OF-LIFE

FROM SOLID—TO LIQUID—TO GASEOUS—TO ETHERIC—TO SPIRIT LIFE

"WITH Thee is the Fountain-of-Life: in Thy Light shall we see Light."—*David.*

RAPHAEL'S FRESCO OF PRUDENCE, FORCE AND MODERATION

1	2	3
FORCE	RHYTHM	FORM
ENERGY	BALANCE	ORGANIZATION

WHEN MAN glances of a clear night into the boundless depths of heaven, he sees starry hosts like friendly guides pointing the Way-of-Life. They not only show him the celestial facts of limitless Space, Distance, Duration, Number, Measure, Motion, and Form, but that these existed before man, and still exist for him. With the naked eye he sees them suggesting a Southern Cross, a Crown, Dipper, Serpent, Orion's-Belt-and-Falchion, the phases of the crescent moon; or circles, ellipses, etc., for their own and their satellites' courses. With a telescope he can sweep the celestial ocean and discover countless worlds at all rates of motion and all stages of Form-Growth in the gatherings of starry dust.

One grand and simple principle of curvilineal motion by centralizing gravity seems balancing all in place and guiding all safely in course, though there are mighty wanderers describing lines so vast, at such stupendous speed, that all gravity of visible worlds would not suffice to retard or deflect them.

Some constellations like that of Hercules arrange their starry atoms along systems of straight and parallel lines, with equal units at regularly equal distances (according to some of the first principles of ornament), yet so adjusted to a converging center that they seem like the corners of a CUBE, at the heart of a CIRCLE, and dividing the circle into equal *thirds!* Prof. Holden, of Lick observatory, exclaimed on describing them: "What force will accommodate such results? Gravity does not seem enough. But other laws of force may govern other systems. It widens our views of Variety in the universe."

Another observer says of all atomic clusters, however large or small: "I find there must be atomic channels along the polarized lines of atoms, through which very fine streams (we may call ethers) are constantly flowing. When moving in spiral channels these ethers must be expansive, and thus constitute heat; when moving on the plane of a vortex, through the center of a line of atoms, they contract and constitute cold, or, in finer grades, electricity. Vibrations are caused by

these ethers as they flow through or against them. Larger atoms must receive their power from streams of smaller ones; ethereal atoms must be kindled by still smaller till we reach the very ultimate of atomic refinement. This ultimate atom must be *vitalized* or the whole universe falls to pieces! We have reached a necessity for an almost infinitely fine, elastic Substance, attenuated beyond conception, swifter than all lightning, called by Emerson the Over-soul, but more properly the Inter-soul. This unparticled essence of being may be termed Pure Spirit. All beings, human, angelic, divine, must have this all-embracing Spirit as their soul principle,—a boundless fraternity in progress of becoming higher, more refined and better (as demonstrated by the vast succession of the ages). All power exists in nature because spirit is there, and conversely all power exists in spirit because matter is there. Although formless, like an infinite ocean, spirit becomes omnipotent reality when linked with the atomic universe. All force would be struck with eternal silence without spirit. Unity-in-Duality is the ubiquitous law. It requires spirit as well as brain to constitute *mind*. Even the psychic body must have the all-searching *spirit*." "Of all realities," says Fiske, "the soul is the most solid, sound and undeniable. Thoughts and feelings are the undeniable facts from which there is no escaping."

MAN finds flaming stars that seem solid, but which really open into world-clusters, unthinkably distant from himself and each other; yet, to the farthest reaches, he is one with nature in his ability to think across such gulfs and to define accurately such orbits; and when he carefully thinks, he finds no confusion nor chaos in the infinite outflow of light, force, movement and transformation! All appeals ultimately to his clarified intelligence, as reasonably majestic and simple in the stupendous unity, continuity and beauty of its design.

The best thought of all ages accumulates and purifies to-day to man's help, to fortify this order long before intimated by intuition or inspiration. Indeed, these last two words grow to mean far more, now that he learns his place on the great tree-of-life whose roots are nourished from below but its leaves and blossoms from above. Intuitions come pouring up from the under world of the historic past, and inspirations from the over-world to which he advances. He is a part of an Over, an Under, and a Mediate existence.

"There is a wonderful entity that kindles this human form," says one writer, "giving it the amazing subtle power of thought. Thousands can close the external eye and perceive, by internal vision, a universe incomparably more beautiful than anything in the outer world."

Yet, adds the same magazine, "how full of beauty and food for high, earnest thinking is our world when we learn to see, think and feel! We are commonplace only when we elect to be, and when we will not see nor hear. Matter is only the prison we make it. Looking one way we enter matter, or density; looking the other we attract that which is spiritual. On the one hand come impressions from the world of matter; on the other come thoughts and influences in the sphere of mind; and we lie open to the attributes of God, the depths of spiritual nature. Looking one way, all we see is apparently material; looking the other way, all appears to be mind. The two worlds unite in Consciousness and form the world of intellectual life, or our interpretation of the great organized Whole of which we are part. In the center exists man. When he seeks their unity he finds it alone in the conscious self which underlies them both. Consciousness is the fundamental fact of existence; it and activity are aspects of spirit. He can never understand himself without constant reference to the omnipresent Spirit in whom he lives. In fact, it is futile to deny either the subjective or objective aspects of life, for the two have evolved together."

When the soul, then, opens inwardly and outwardly toward all Truth—as the age now demands of all thought upon all subjects—and concentrates the helpful light from every quarter, then the grand elements of Beauty open—visibly to the eye; audibly to the ear; comprehensible to the mind; inspiring to the heart.

Standing between the past and future—the upper

and under world—man seeks to associate all potencies of mind and heart in order that eye, ear and hand may see, hear and create to highest purpose.

The wonderful intellect and heart of Paul anticipated, two thousand years ago, the light that science is confirming to-day upon the great *Unity-in-Duality-and-Variety* of Being, where he testifies to the struggle within himself and all things to incorporate the celestial self (in which he was one with God) into the terrestrial material self (where he was one with man and matter). He states clearly, "There are also celestial bodies [or forms], and bodies terrestrial."

The Creator knows the upper, ideal self that he puts into each being at birth; the world knows only our outer selves that its physical and social conditions permitted or imposed. Our various friends know us in varying degrees, as they themselves approximate the heavenly spirit which alone calculates correctly all obstacles and temptations—that yet develop character by heroism and determination.

Paul gives witness that these two—celestial and terrestrial—states interlace so closely that in an hour of special union, sympathy and vitality, he "knew such a man (whether in the body, or out of the body, . . .) . . . caught up into paradise, and heard unspeakable words, which it is not lawful for a man to utter,"—not lawful, at least, at that date; for Christ himself said he had many things to tell man, but man was not then ready.

Thus he attested that universe manifests itself on two contrasted, but complementary, sides of harmonic internal and external Reality, as well as by variety of graded, progressive ascents to seventh heavens. And he also tells us that: "Eye hath not seen, nor ear heard, neither have entered into the heart of man, the things which God hath prepared [in the upper series] for them that love him."

TORSO BELVIDERE

SAYS a modern art writer: "In the gallery of the Vatican may be seen a statue which, for over three centuries, the greatest artists and critics regarded as one of the noblest works of those master spirits of the past, whose feelings found utterance in enduring marble. It is of colossal proportions, and represents a man at the zenith of his strength, though everything about the figure indicates a state of most profound and peaceful repose. The massive shoulders, powerful chest, strongly developed limbs, muscles in huge masses, speak of that period of life when for sturdy vigor, toughness of fiber, and ability for powerful achievement the forces of the body have reached the highest point. But the work has been injured to the last degree short of entire destruction. The head is wanting; the arms broken off at the shoulders; the legs at the knees; and these precious fragments have never been found. Only the grand *torso* remains to indicate what the full beauty of the perfect statue must have been.

"It is a beautiful symbol. The Sphinx sat for centuries over the ancient world probing the questions of life, and at last answered itself: In the wisdom of God the world by wisdom knew not God. The head, type of intellect, disappeared. Then came the age of action—the busy arms and legs—rushing over the world, conquering every corner under Rome, wrestling through every

social throe or rival passion during the contortions of religious, political and social battle. Finally comes the vast world deduction: Though I have all knowledge and give my body to be burned and subdue all mountains, and have not Love, it is nothing! So the arms and legs are hewn away. What have we left? The Heart and Productive Reins—seat of affections and life propagation."

Now, in a vaster sense, this symbol can cover the conditions of much earlier being than the most beautiful manhood. There is something in it of that Christhood of the Divine Man, after whose image we are created, and unto whose "fullness of stature" man must attain. The dual world of mind and matter, soul and body, are both alive. Matter is only apparently static or asleep. It stands, so to speak, as a passive fulcrum for the active power of spirit to play upon, and it *appears* stationary *only that we may measure and appreciate the inner significances and ideals revealed through* Form. For if formalized matter did not appear static, it could not appear at all, since the eye could not seize relations, nor measure distances and equations of organization, when no point was located in space to measure from, nor remained still enough to establish a point-of-departure. Hence matter is not so much a dynamic necessity as an intellectual necessity.

We can conceive of abstract spiritual energy (such as thought itself seems to be) or even picture forms in the brain—never made visible on earth. But if, as artists, we desire to *convey* these thoughts and pictures to others, we must resort to matter to convey them. And so it seems to be with God himself in revealing his ideals to man. He does so by means of FORM, which is apparently arrested motion; or, rather, is etheric points sufficiently arrested, organized and concentrated, to "appear formally," within our capacity of vision. Hence the invention of the term or concept "atom" or "matter." Science says that the ultimate atom is ultimate only relative to human intellect. It is the limit of human research on the side of the infinitesimal; the point at which the Supreme Mind says, "Hitherto shalt thou come." "Be still, and know that I am God."

In reality, *Matter does not matter. All is Spirit!* The smallest atom is still found alive in a sea of Life, which is itself infinite and infinitely pervaded by thought and feeling. In the last analysis the atom is still found an activity. Prof. Chesley claims that the views of Leibnitz are being confirmed, that the ultimate atoms (or monads) have intelligence and soul, since infinite mathematical division may deprive them of extension but leaves them centers of energy with properties of resistance and evolution; *intelligent* forces with the supreme attributes of mind in the ability to acquire knowledge, obtain progress, and attain the increasingly wonderful sublimities of consciousness. They also reflect (as does every human soul) the infinite unity and variety of spirit. So that Spirit and Intellect are the only absolute and essential Reality. The rest of nature —even space, time and matter—are relative realities of outer husk or expression; and that the "soul would be God, if it could enter at once and with distinctness into everything occurring within itself," but it was necessary (for soul growth) that we should have something involuntary and unknown which represents our body—or a stupendous system of cosmical evolution up to consciousness of God.

SO THE Grand Torso seems asleep, inactive in divine repose, and almost destroyed. Yet it is *alive*, virile, forceful, suggestive, eloquent and appealing, as all past greatness and truth "being dead yet speaketh." It is pregnant with forces of Heart and powers of Eternal Propagation. It only waits for the noble beauty of the head to be restored, and the blessed activities of the members added.

And so, too, with God's *chef-d'œuvre*—the Universe of Beauty. The atoms but seem dead to dead eyes. The heart beats bravely and tenderly on through ages of divine sympathy and compassion. The mystic powers for propagation of truth still scatter the precious seeds of life that revive the quenchless form of the ideal. Barbarity of man sunders head and heart, and paralyzes the ministration of hands and feet. Dark-

ness covers the land and gross darkness the people upon esthetic laws and applications in industry, yet cosmos is *alive* with light, life, hope and beauty, and every atom of matter awaits the inspiration of revived and heavenly compulsions. The whole creation groaneth and travaileth 'till now waiting for the full adoption.

The English poet Carpenter eloquently writes: "The divorce of the intellectual from the emotional has caused a great part of our scientific observation to become pedantic and trifling. The facts of Nature are half FEELING. To clean the feeling out of a fact is to take the clay out of the brick. The truest truth is that which is the expression of the *deepest feeling*. The brain stands transitional between the nerves of sense and the great sympathetic nerve, the organ of Emotion. Filling up facts with feeling by direct and living contact with Nature in every form, Science will ascend to the Great Central Fact and Feeling, and become conscious of a vast organization absolutely perfect—the true cosmos of man and God combined—existing in every individual creature. We shall take the mechanical sciences up into the physical, the physical into the vital, the vital into the social and ethical. Does there not exist an Inner Illumination by which we can see things as they are,—all creation, animals, angels, plants, all ranks and races of humankind in their true being and order? Does there not exist a perfected sense of hearing as of the morning stars singing together; an understanding of the words spoken through the universe; the Hidden Meaning; a profound, far-reaching sense? Nature is explained by being felt to be the BODY OF MAN—marvelous interpreter and symbol of his *inner being*. Around the ultimate disclosure of the IDEAL MAN, all creation ranges itself as it were like some vast flower in concentric cycles, rank beyond rank, social life; history; the animal, vegetable and mineral worlds. With the appearance of perfected human form, creation definitely completes itself. Behind sleeps the Demos Life with far vaster projects and purposes. Some time or other to every man must come the consciousness of this VASTER LIFE."

This Immanent Spirit of Divine Manhood above and within all planetary manhood, is what Wilkinson calls "The Omnipotent Human Form or CHRIST, the real presence in every temple, burning with uncontrolled intensity in the thought of man, in the records of inspiration under the religions of Nature. When analogy is better known, the light that issues from the unfolded doors of the Human Body will stream forth into the vault of Nature and kindle celestial physics with a breathing wisdom that could never come from inanimate things, even though their theater be ancient night with its gorgeous pageant of stars."

OF THIS Manhood the bright soul of the great physicist Clifford wrote before his death: "Many names of many shapes have men given this Presence, seeking by names and pictures to know more clearly the Guide and Helper of men. No such companionship with the Great Companion shall have anything but reverence from me. The dim and shadowy outlines of the superhuman deity fade slowly, and as the mist floats aside we perceive with greater clearness the shape of a yet grander and nobler figure of Him who made all gods and shall unmake them. From the dim dawn of history and the inmost depths of every soul, the face of our Father Man (macrocosm and microcosm) looks out upon us with the fire of eternal youth in his eyes."

Says the ancient Cabala: "Before the Ancient-of-the-ancient-ones and the Concealed-of-the-concealed instituted the formations of the King, beginning and end existed not. Therefore he *carved out and instituted Proportions in himself*. By means of these he conformed himself in that Form which comprehendeth all forms and names. All these sacred diadems of the King, when he is conformed in his dispositions, are called Adam (Man), which is the form which comprehendeth all things, and in that formation appeareth the Perfection of all things above the Throne, like as it is written [in Ezekiel], 'the appearance as the likeness of Adam [Man] upon it from above.'"

The "Christos" or "Perfect Man" of Hebrew revelation said to his Hebraic followers: "Other

sheep I have, which are not of this fold," "Before Abraham was, I Am," "No man cometh unto the Father, but by me," "I and my Father are one," "Thou . . . in me, and I in thee, that they also may be one in us." Which reminds us of the East Indian Krishna's words: "Even those who, being worshipers of other divinities, worship with *faith* worship ME. Who worship me with devotion dwell in me and I in them."

The apostles and early fathers recognized this Universal (Christos) Man, "whose goings forth have been of old, from everlasting to everlasting."

So Paul says to the Greeks: "Whom ye ignorantly worship, Him declare I to you."

Eusebius says: "No one may suppose our Christ was merely a new-comer."

St. Augustine says: "The thing itself (in essence) now called Christian religion was known to the ancients, but in our day at Antioch received that *name*."

St. Clement of Alexandria says: "The Son of God is never displaced nor divided, being *always everywhere*. As the complete Mind, complete Light, Christ is called Wisdom by the prophets. There was always a *material* manifestation of the one Almighty God among all right-thinking men. He whom we call Saviour and Lord gave philosophy to the Greeks and to barbarians."

And Justin Martyr adds: "Christ is the word of whom the entire human race are partakers. Those who live according to REASON, are Christians, while those who live without reason are enemies to Christ. Each man of the heathen writers spoke well in proportion to the share of the Word of God in him."

Among later fathers and philosophers, Bishop Martensen says: "Christ is the ground and source of all Reason in the creation, be it in man or angel, in Greek or Jew. He is the Principle of the Law under the Old Testament and the Eternal Light which shines in heathenism. All grains of Truth are sown by the Son of God."

Swedenborg declared: "In all the heavens there is no other idea of God than of a Man. Heaven is a Man in form, the Greatest and the Divine Man. Man was called a microcosm by the ancients, because he resembled the macrocosm; and from the knowledge of correspondence which the most ancient people possessed. . . . The center produces the circumference. God the Infinite is the center; finite existence is the circumference, and as there are Three distinct vibrant atmospheres between earth and sun, namely, Air, Ether and Aura; so lower and upper Man connect through Body, Soul and Spirit."

Of Swedenborg's insight, Mr. Emerson says: "He saw the Human Body was strictly *universal*, or an instrument through which Soul feeds and is fed by the whole of matter. The mind is a finer body, feeding, digesting, excluding, generating in a new ethereal element. In it are male and female faculties, marriage and fruit, and there is no limit to the ascending scale. We are adapted to infinity. In Nature is no end; everything at the end of one use is lifted into a superior. Creative force, like a *musical* composer, goes on; now high, now low, in solo, in chorus, ten thousand times reverberating 'till it fills heaven with its chant."

In the "Upa Sastra," Hawkins says: "Creation is a Man, its divine soul permeating every atom. It may be said that the Divine Essence is in one place or atom more than another, in this sense, that in every organism (of universal cosmos or of any sub-form) there is a higher *degree* of life pervading central planes, and a gradually lower degree of life for planes more toward the circumference,—the human organism comprehends sidereal and solar spheres."

And the Abbé Constant, paraphrasing the Hebrew "Zohar," writes of creation: "All the aspirations of Nature were directed to Unity of Form—living synthesis of unequilibrated forces, and the forehead of God, crowned with light, rose over the sea and was reflected. His radiant eyes appeared. The forehead and two eyes of God formed a Triangle in heaven and the reflection formed a Triangle in the water. Then was the number *Six* revealed of universal creation. *Equilibrium is everywhere*, and the central point where *Balance* is suspended may be found *everywhere*. The synthesis of the *Logos* formulated by the human figure slowly issues from the water like

the rising sun. When the eyes appeared, light was restored; when the mouth was revealed, spirit was renewed and speech heard. The shoulders, arms, breast come forth and labor begins. The Divine Image with one hand puts back the waters of the sea and with the other raises continents! Ever it grows taller; the generative organs appear and all creatures multiply. At length it stands erect, sets one foot on land and one on sea, is mirrored wholly in the ocean of creation, breathes on its reflection, calls its image into life. 'Let us make Man in Our image,' it says, and man appears."

THUS "the measure of the stature of the fullness of Christ," of which Paul spoke, is gradually dawning on mankind along all sides and gateways of material realization. Science, Religion and Art together feel, throughout their systems of experience, correspondent vibrations of the great general inspiration.

"Go where one will," says Harris, "among the most humanized and scholarly, and there is found an occult Christo-centric science which accepts in principle that Christ is not dogma, but *spirit*; not hierarchical but humanitary; not repressive nor stationary but evolutionary—its object the reconstruction of the planet in the Form of its divine Genius. The charm and delight of existence, its honor, grandeur, dignity and power, its beauty and exquisite agreeableness, are found in the most infinite and confidential relations between God and man,—the One Man to all men,—the Every Man to each."

But spiritual things must be spiritually discerned, and, as Tracy writes, "Every man has a limit in his vision of this Son of God,—he can see only to the height of his own *spiritual stature* and level."

"Nature, art and the sympathy of things in the universe," wrote Porphyry to the Egyptian priest Amebo, "contain, as parts of One Living Being, premanifestations and references to each other"; and Plotinus wrote, "This universe is as One Living Being,—nothing in it is so distant as not to be near the nature of the One Being, on account of its sympathy with the whole of itself."

Thus what the Egyptian Hermes called "the immutable work of God, glorious and perfect edifice, manifold synthesis of forms and images, wherein his will, lavish of marvels, has *united all* things in a harmonious whole," was felt "forever worthy of veneration, praise and love"—but every age and race had to feel its separate way up to its comprehension and realization.

"How," says Schelling, "if, in mythology, were found a superior intelligence which would reach far beyond the horizon of the most ancient records?"

For this reason Max Müller states: "When the deepest Foundations of all religions are laid free and restored, who knows but that those very foundations may serve, like the catacombs, as refuge for those who long for something better, purer, older, truer, than the sermons of the day. Such believer may bring into that quiet crypt his pearl of great price; the Hindu his disbelief in this [material] world, but unhesitating belief in another [spiritual]; the Buddhist his perception of eternal law, his gentleness and pity; the Mohammedan his sobriety; the Jew his one God of righteousness; the Christian his better God of Love. That crypt is visited now by those who shun the noise and conflict of many voices. Who knows but that it will grow brighter and brighter, and the crypt of the past become the church of the future?"

"The voices of true religion and true art," says the great musician Wagner, "unite in revealing the germs of a possible kingdom not of this world. It is the duty of all to strengthen the *Foundations*." For, according to Roger Riordan, "Art whose words are things, whose symbols are types and whose grammar is beauty, is the Universal Language that needs no interpreter!"

If ever we are to discover interstellar communication, or even an international "Volapük," it must be by some primary keys of Form, Color, and Sound that lurk in the origins of Universal Art.

Some of the latest scientific truths most helpful and inspiring to the artist-spirit (in every form of art expression) may be condensed from many search-lights and thus focused:

Spirit is infinite and present in everything;

mind and emotion are infinitely present in spirit; ideals are infinitely constructive in mind; atoms are but etheric points, (apparently) arrested for the measure and transmission of form concepts; beauty of form is the beauty of its inner ideals and of its organized ratios—its contents of design for purpose and expression.

Mathematical law shows no limit to multiplication, or division, and no limit to space, time, power, motion, or transmutation of form. Telescope and microscope practically find no limit to the multiplication of hosts above, or of subdivisions of life below us. The nearest star is yet so far that its light takes twenty years to reach us, though speeding 186,000 miles per second. Yet in the smallest particle visible to the strongest microscope are more atoms than all stars visible to the strongest telescope!

TO DEITY there can be no large nor small. It is all relative to man's self in intermediate position—looking upward and downward from one's self.

Substance that man calls solid is really open to the transfusion of liquids; liquids open to gases; gases open to ethers; ethers open to infinite spirit! And motion, life, intelligence, law is ever found *in all*—harmoniously active, consistent, reasonable (with which the reason of man is concurrent), and inspired by omnipresent feeling (with which his emotions can be consonant, his will coöperative).

Man finds himself, with all nature, suspended in a sea of Infinite Godhood, the glory of his life being, thereof, the discovery and affiliation.

King David, in his 139th Psalm, magnificently describes how Deity fills the immensity of space with his presence. And Paul exclaims: "*In* Him we live, and move, and have our being."

Man's highest joy and potence becomes the discovery of the methods and principles of this All-Active-Spirit.

Now let us consider regarding these descending steps by which ideal forms in spirit become visible forms in substance.

Shortly before leaving earth the beautiful soul of Helen Hunt wrote: "We have learned that the true meaning of law is not decree, but formulæ of invariable order. In the realm of spiritual growth nature is one, and all known sensible qualities of matter are ultimately referable to immaterial forces acting from point or volumes."

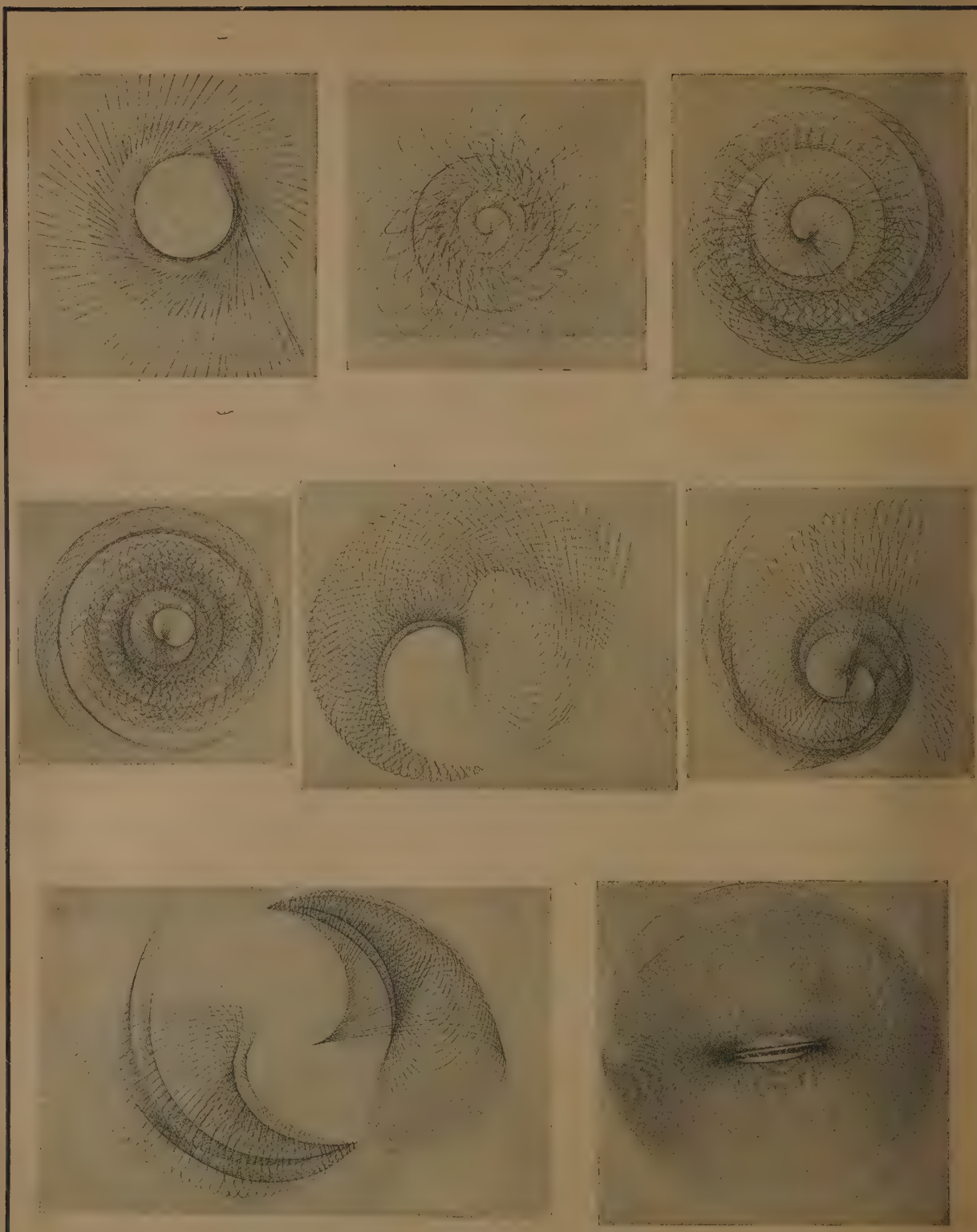
So if an atom is the last reducible point of substance—the last physical station or jumping-off-point from matter into spirit—it is ever associated with mind and life; it is ever *alive* and in actual motion.

The etheric medium (which is the highest refinement of volatile, frictionless force that man can appreciate) *impregnates everything*, and must be impregnated with energy direct from God, for universal and uniform laws of intelligence pervade it, giving the same series of changes, the same properties of Space, Time, Number, Magnitude, Matter, etc. All worlds are pervaded by it, as it is pervaded by some One Great Force whose activity is Motion and whose atomic law is Rhythm—the extremities of the atom being so polarized, perhaps, as to tend to alternate oscillations. The whole is Rhythmic and Harmonic Equilibrium. "The material world, in all its Beauty, is built up," says Fiske, "out of undulations among molecules." That is, whatever be the law of primordial life, its manifestation, in atomic form and order, is *rhythmic*. Each atom vibrates to laws of metrical beat, or "time," which, passed on to molecular waves of air, would constitute sound and music. The morning stars "sang together," as Job declared; and every flower has doubtless its own voice and rhythm, in heavenly adoration, quite audible to the angelic hosts and possibly to human ears also when appliances shall grow sufficiently refined to catch it.

Mills Whittlesey writes: "It is only when Space is diversified by Color that we fully perceive the beautiful in space; it is only when Time is diversified by Melody that we fully perceive the beautiful in time. Music is the beautifier of Time. Heat, tone, color, come from vibrations of varying rapidity. Doubling the number of vibrations of a tone produces its octave. The thirty-fourth octave of a certain tone produces a red *color*. Tone and color are then interchangeable. A single tone prolonged

THE accompanying chart contains a few of many delicate experiments by Mr. A. H. Percival, of England, attempting to record, by a finely-adjusted pen-mechanism, certain mathematically exact ratios in spiral expansion and convolution, which closely resemble those of sea-shells, musical horns and even natural growths in vegetable and animal life.

It is probable that by some such delicate and exact instrument, added to the principle of the phonograph, man may secure the tone vibrations and reverberations which will correspond to these forms of beauty about us, and to realize the double expression which Henry Ward Beecher once described as: "The honeysuckle murmuring, the violet whispering and the rose singing its individual Song."



SOME SPIRAL VIBRATIONS — (By Percival's Instrument)

EIDOPHONE PICTURES OR VOICE-FLOWERS

THE PRINCIPLE of sound-vibration, as registering certain geometric figures of various delicacy and beauty (upon sensitive plates covered with liquid or powder) has been known and experimented with for some years, but the accompanying illustrations of several secured by Margaret Watts Hughes upon a pipe-bowl, from tones of various singers, whose notes were at different times recorded and photographed, are particularly interesting, on account of their close resemblance to corresponding relations of form in sea-shells, ferns, flowers, and growing trees. In these the photograph has rendered to us, *directly*, the effect of the musical vibrations sung down the pipe-stem and affecting the relations of the particles of powder, dancing them upon the sensitive membrane across the pipe-bowl, until these beautiful formations appeared in response to some different quality or pitch of the singer's voice. Thus we may say that the very individuality of a singer's soul can reveal itself in different arrangements or formations of audible and visible Beauty. And it is found that even *sex* quality is evident in two diagrams reflecting the same note at the same pitch, but sung by different sexes. So that we may claim that all Nature and every flower or gem is but the varied tones and chords of the Celestial Symphony which is pouring forth from the Voice of the Creator.

The reader may obtain fuller details in *The Century Magazine*, Vol. XLII., page 37, and in *Good Words*, Vol. XXXVII., page 104.

A. de Lemud, Pinx.

BEETHOVEN'S DREAM OF A CELESTIAL CHOIR

makes us conscious of duration and may induce depression, while a sprightly, rhythmic air pleases. Between these extremes every emotion may be excited from grave to gay. Hence music is the beautifier of time *by exciting and expressing* the emotions. Persons of musical cultivation find through their favorite musical instrument a responsive sympathy that no friend could give. Handel said, when he composed the Hallelujah chorus, that he thought he saw heaven opened before him, and the great God himself!

"In apocalyptic vision, the beautiful in Space is symbolized by the *cubical* form of the eternal city, but the beautiful in time by harps and voices. Doubtless we expect more perfect and additional senses. It is difficult to believe we shall lose perception of the beautiful in tone and color. It is necessary to think we shall gain a faculty which can perceive spiritual bodies. Then, with senses immortalized and perfected, the thirty-four octaves between tone and color may become vocal; the music of the spheres may no longer be unintelligible; and the whole universe may audibly voice the praise of the Creator."

SCIENTIFIC, artistic and musical minds are already experimenting in the direction of correlated Sound, Form and Color with the purpose of discovering, if possible, both their esthetic correspondences and some mechanism like the phonograph, which may retain and translate these musically.

Man has already discovered an instrument

called the "eidophone," on which different voices, singing different tones, set in vibration delicate atoms of dust which cluster into the most wonderful corresponding forms of flowers, trees, seashells, etc., so that the reverse instrument may yet be discovered which will give the *Songs-of-All-Forms*, and thereby the mighty *Symphony-of-the-Universe*. Of these wonderful "Voice Pictures" we give a page of illustration showing that science has caught the link between atomic vibration and beauty, and we will yet hear the celestial voices, the Song-of-songs, from every beautiful and animate thing, which God is holding in reserve for his human children!

Upon a still higher plane of spiritual correspondence the genius of the artists De Lemud and Fantin-Latour have endeavored to portray, by human forms of exceptional elegance and symbolic beauty, the special visions evoked in their souls by the musical suggestions of great composers like Wagner, Schumann, Beethoven, etc. We give three of Fantin-Latour's exquisite conceptions of form and color as they rose in his brain to the strains of Wagner's Siegfried and Rheingold, or as Schumann's delicate inspirations became transmuted from sound to sight within the artist's spirit.

The great Beethoven was particularly open to such delicate suggestions, full of compound spiritual and physical import, while he composed beneath the shadow of his beloved trees, and within reach of all the voices of the birds and flowers. In one of his letters he says: "No one can conceive the intense happiness I feel in getting into the country among the woods, my dear trees, shrubs, hills and dales. I am convinced that no one *loves* the country as I do. It is as if every tree and every bush could understand my mute inquiries and respond to them."

Hither he took his light spinet for reverie and composition, and dreaming over it beheld the visions of a celestial choir which filled his soul with inspiration, and which the painter De Lemud has so powerfully presented in the accompanying picture that Mrs. Phelps-Ward makes one of her humble characters in "The Silent Partner" exclaim, at seeing it: "It's riding over him—the orchestra! He can't master it—don't you see? It sweeps him along. He can't help himself! They come and come. How fast they come! How he fights and falls! O, I know how they come! That's the way things come to me—they tumble over me just so! I did not know there was any such picture in the world. I'd like to look at that picture day and night. See! O, I know how they come!"

PERHAPS nowhere in all history exists a more tender, chaste and holy presentation of this inner consciousness of the human race (that Beauty, in physical and musical expression, is but temporarily separated by some ordinance of Heaven) than in the exquisite accompanying and very antique Greek poem in marble, of Orpheus separated from Eurydice by the divine messenger Mercury. The God of Music, who could charm all nature to his footsteps, holds the sacred harp at his side. Eurydice, in all the splendor of mature and gracious feminine form, clings to him lovingly as they gaze mutually into saddened eyes. While the heavenly messenger (patron of the sciences and art) with winged hat cast back as though warm from travel through celestial space, and sensitively clutching up his robe as though in sympathy, draws them apart with gentle and considerate fingers. His attitude is in no sense that of ruthless or hopeless division, but rather that of one who (as implied in the story) knows well the celestial scale or "Jacob's ladder" by which he has himself descended, and that, in the rhythmic and necessary pulsations of Nature, there is a point where their spirits will ever meet and repeat the annual reunions of their love.

Thus, under the guise of graceful and poetic symbols, the deep-seeing and penetrating genius of the ancients embodied their most profound scientific or religious convictions. They watched their flocks by night beneath the solemn and wonderful blue vault of heaven, alive with moving constellations. They could not help but observe their regulated courses, times and seasons, in *geometric* movements. Their astronomy and astrology became one in the instinctive recognition of

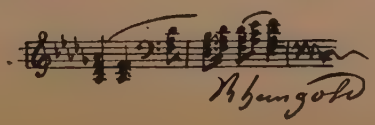
Henri Fantin-Latour, Del.

By courtesy of Mr. Charles L. Freer

EVOCATION OF ERDA, IN "SIEGFRIED"

Henri Fantin-Latour, Del.

By courtesy of Mr. Charles L. Freer



Henri Fantin-Latour, Del.

By courtesy of Mr. Charles L. Freer

SCHUMANN'S "LAST THEME"

[See page 60]

MERCURY SUMMONING THE LOVERS ORPHEUS AND EURYDICE

(Ancient Greek carving)

a Great Regulator or Regulators behind the veil of mechanisms and manifestations. When even such coldly logical minds as Galileo and the modern Sir Isaac Newton could feel that in discovering a scientific truth they were "thinking the thoughts of God" and that "Gravity is the immediate finger and longing of Deity," how much more the sensitive and alert intuitions of those elder days. The relations of those golden atoms in the blue sky, which now we know to be infinite worlds, clearly suggested, by their movements or clusterings, regular geometric and organic forms. The signs of the zodiac became convenient symbols and forecasts of celestial personalities or significances. The incompleteness of their primitive guesses does not lessen the general soundness of their intuitions which wider knowledge now fortifies.

The astronomer Proctor pointed out that: "The history of the world is intimately bound up with the history of the universe, and every event with events preceding and following, in endless causation and interaction."

Referring to this truth Prof. Colbert adds, that: "The principles of astro-philosophy are that all parts of the grand total are intimately connected —the value of the science of astrology being that it lies at the foundation of the whole philosophy of Nature. The ideas of olden time were simply erroneous in detail, not in principle. The letter kills, the spirit is full of life. Gospel parables were not less valuable because not understood by the multitude."

Says Wilkinson: "It is remarkable that the influence of the vegetable world upon climate should be admitted, and no influence from the human world of a higher kind be suspected. Are thought-movements and will-movements sooner absorbed than sound-movements? Do they sculpture the air with less efficiency? Is the music of men's brains and lungs of no Orphic power in the tenseness of God's created harmony? The Eddas and poetries bind mankind into sheaves, being as common respirations or great world tunes, the sum of beginnings of musical acts from sailors upon the River of Time. The material breath falls in dregs which soon pass away, while the mental breath endures we know not how long; for as the poet says of the Forum,

"'Still the eloquent air breathes with Cicero.' . . .

"The more we contemplate the mental engine, the more rhythmic thought is found to be—the *more in tune with the stars*. Starry dance, music of spheres, astrological influence, supernatural experiences are but aims to express properties of immortal nature. Sunshine and shade, moist and dry, thunder and frost, influence of climates, *play on our mind and vitals*. Reactions we add to Nature give her new beams or deepen her gloom. Man is a divining rod! Providence *uses the body to shape our lives*, for much arises within us without apparent cause,—dictates, suggestions and feelings, —calm seeming to come from afar! But, however produced, they shape our being. Fate, instinct, thought play on our harp of a thousand strings—touched into melody by the Great Musician!"

IT WAS this early consciousness of interstellar influences, added to their wood lore and sibyllic intuitions from surrounding Nature, that taught our deep-eyed ancestors their primitive but potential concepts of Truth (physical, ethical and esthetic). They naturally seized on every suggestion and help to gain guidance for their own movements from the forms, implications and movements of the heavenly hosts. These, to begin with, were the first and highest manifestations of Divine splendor and direction above them, as natural forms of beauty on earth were the nearest embodiments of God's concrete ideals and methods, about them. "Sidereal religion prevailed before the invention of writing and the earliest symbol of Deity was a star. The zodiac was man's first Bible, and hieratic characters became shorthand marks for constellations. A Bible is always a hieroglyph of the soul and the zodiac is simply the first and most stupendous of Bibles. They have stood and probably will stand immutable from age to age."

The Hebraic prophets, philosophers, and seers

were not ashamed to join their brethren of Chaldea, Egypt and Greece, in recognizing these mystic astral influences ascribed to the heavenly hosts. "The stars" were frankly asserted to have divinely and directly "fought against Sisera" on his tyrannical career; and the apostles of Jesus tell how the magi or eastern wise men were led by "the Star of Bethlehem" to the Christ-cradle.

Says the author of "Light from the Great Pyramid": "The ancient Hebrews represented the stars, severally and collectively, by the letters of the alphabet, and to read the stars was more than a metaphorical expression with them. Jews, Platonists, and fathers of the church believed in a Celestial Writing. In Holy Writ the heavens are repeatedly spoken of as a book or a written scroll; and we are told that an understanding eye may distinguish that the stars in their groups form Hebrew letters, besides those imaginary shapes called the Signs of the Zodiac. This theoretic connection was based on the ancient Cabala, that the three mother letters corresponded with the three worlds (Divine, Human and Material; or, Spirit, Soul and Body); the seven double letters corresponded with the seven planets, and the twelve simple letters with the twelve zodiacal signs. They employed these twelve signs for the twelve tribal elements of their twelve brethren, sons of Jacob. When Paul was converted he passed *three* [symbolic] years in Arabia [the home of the star-worshipers] and then returned to declare 'the mystery hidden among the Gentiles.' These ancient foundations are the source whence the great arteries of the True, the Good and the Beautiful draw sustenance."

FROM THE GREAT NEBULA IN ORION

KEY

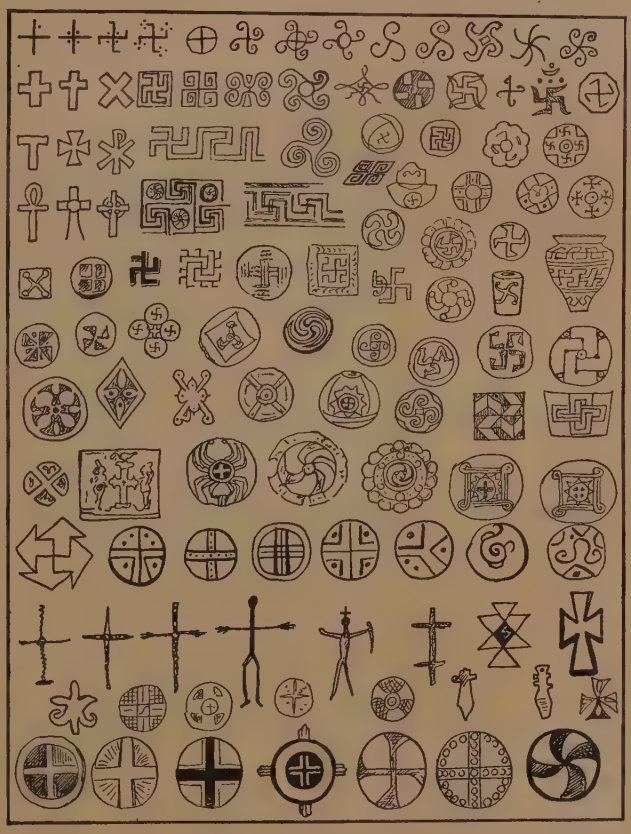
Skinner, in his "Source of Measures," says: "The Hebrew alphabet held also their numerals; as if our a, b, c, stood for 1, 2, 3, etc. It was not an accident of language, but of its very essence and primary organic construction."

Parker claims that in the construction of the cosmos *all* bodies are founded, as to shape, size, density, and motion, upon underlying law capable of *geometric* exhibition, and that there is a single number-form through all diverse relations. The base of this law is "the relation of geometric elements in the Square, Circle and Triangle," which

are forever caught up universally in the symbols and utensils of mankind.

In a photograph which Prof. A. R. Parsons gives of the great nebula of Orion, the numbers 1, 2, 3, 4, 5, 6,—peculiarly connected with the geometric forms of Square, Triangle, Lozenge, Parabola, etc., are distinctly visible. And the animal form of a squirrel suggested in it to our own eyes, may account for the ease with which the ancients merged formations geometric into formations constructional and organic—as in the Dipper, the Crown, Cassiopea's Chair, the Swan, the Hydra, etc.

The illustrations of symbolic ancient forms (see page 75), which Prof. Parsons has incorporated, with explanations, in his "Light from the Great Pyramid," show some of especial interest and significance. The rectilinear and rectangular form which we call a Cross, when arranged in upright and horizontal relations to signify the equipoise of gravity, was perhaps the oldest of human symbols. Early man could see it suggested in the Sword-of-Orion, in Cygnus, in the Southern Cross, and other constellations. It is the axis of the Square and Cube, and the very heart of the diamond—earth's most dazzling and enduring gem. It became worshiped widely and incorporated in the base of eternal pyramids that overran the globe and are found in every continent. The very foundations of heaven were said by St. John to retain it in the measures of the Square. Most of all it became mystically prevalent in the so-called "Swastika" form, where lateral flanges added to the ends of the cross give it the optical implication of *revolving*. The tensions of equilibrium, by set and severe angles, seem thus yielding to a higher *equilibrium in curvature*, as though the rigors of rectitude and competition were giving way to the nobler grace and beauty of coöperation as explained later.



THE SWASTIKA

Curator Wilson, of the U. S. A. Museum, says: "In the estimation of many writers, the Swastika has been respectively the emblem of Zeus, Baal, the Sun, Sungod, Lightgod, Agni firegod, Indra raingod, Skygod, and finally the Deity, Maker and Ruler of the Universe. It is believed to be the oldest Aryan symbol and to represent Brahma, Vishnu, Siva, Creator, Preserver, Destroyer. It appears in the footsteps of Buddha, engraved on the solid rock of the mountains of India. It stood for Jupiter Tonans of the Latins and Thor of the Scandinavians. Others have recognized it as the Generative Principle of mankind and its appearance on certain goddesses caused it to be claimed as a sign of fecundity. At all times an attribute of its character was charm, benediction, good luck. It was always ornamental, and spread practically over the world."

This beauty of curvilineal equilibrium and balance between center and circumference (centripetal and centrifugal forces) symbolized in the form of circle, crescent, aureole, globe, etc., extended more and more into universal acceptance throughout religious and domestic forms, as it is the largest element in mechanical forms for the distribution of force.

We shall speak of it later and more fully in its proper place and connection with the square and star, or as coming dynamically between the competitive and the coördinated conditions of force (see page 109, and Chart XII.). But just now notice its primitive recognitions in astrological and mythological emblems—based upon astronomy and geometry.

The Egyptians placed it between the balanced wings of their sacred Ibis, keeping Unity and Balance strongly marked, with the element of Radiation or Variety beginning to appear. Again, they suspend it over their Bull (an animal whose rigid resistive strength was sacred to the deity Osiris) and incorporated it in his horns; while upon his back nestles the sacred Dove of gentleness—so beautifully repeated by the descending Dove of the Holy Spirit upon the Hebrew Christ—as though "out of the strong came sweetness."

Samson's riddle was thus the same "sacred bee in the mouth of the Lion" that we see in Fig. 11, page 75, rendered into a different mythological version.

We detect the circle again clearly in the feminine breasts and coronet of Asian Isis, European Diana, Christian Madonnas poised upon crescents and auroeled by radiant flames.

Symbolic Pan, with the same wings and horns, catches it in his shepherd's crook which is balanced symmetrically with his reverberating Disk. This latter holds the concentric grades of sound vibration and the pipes of Beauty in proportion and gradation.

Even our humble Indian of America, long before the arrival of Aryan whites, had kept the circle sacred in his totem of "buffalo horns" placed between his rigid spear, in front, and his radiate feathers behind.

Finally, the deepest thinkers, penetrating into the essence of *all* physical Form or astronomic Motion (as explained in a coming chapter) had symbolized it in overlaid concentric Square, Circle and Star. The human form of sacred Man was then extended upon this rectilineal Cross as the axis of them all. (See Fig. 9.) In this the Hindu had put the radiate Star at the point of human life generation.

The Aztecs embodied the same concentric symbol in their sacred Zodiac (Fig. 10), and put the circle's center at the navel point—where the child is attached and detached—as Da Vinci subsequently demonstrated. (See page 230.) Then with marvelous premonition or intuition of coming science, they represented the Serpent (as the symbol of wisdom) between the man's feet and *spirally evolving upward along the axis of man's cross.* It was a startling herald of scientific discoveries which advancing mind has attained to-day.

THE GALAXY ACCORDING TO HERSCHEL

Modern astronomers and physicists now assure us of man's progressive, aspiring evolution through geological and zoölogical eons of divine labor, and that our solar system is revolving about the beautiful cluster of Pleiades.

But what mysterious compulsion enabled the mighty seers of Egypt and India to group the Pleiad cluster systematically (in Fig. 2) as a hen collecting her radiating chicks about her upon a Square planisphere; and the Christ to call out to the City of David: "O Jerusalem, Jerusalem, . . . how often would I have gathered thy children together, even as a hen gathereth her chickens under her wings"? Was this not an echo of the far earlier challenge of the Almighty to Job: "Canst thou bind the sweet influences of Pleiades, or loose the bands of Orion?"

Herschel even assures us astronomically that our starry firmament (as seen from earth's posi-

[See page 69]

ZODIACAL SUGGESTIONS OF FORM

(From ancient mythology)

[See page 71]

SOME SYMBOLIC FORMS FROM ANCIENT RELIGIONS

tion) gathers itself mathematically and geometrically into the form of a mighty galaxy patterned upon an elongated Circle (or Ellipse), centrally overlaid by a Cross, the extended members of which compose in the same constructional disposition as the limbs of ascending animal or human forms. What mighty symbolic implication, then, is contained in the historic "crucifixion" (or crossifixion) of the Christ, as the one *perfect* "*Man*" capable of enduring in the flesh the supreme test of absolute rectitude?

Says a Japanese philosopher: "No human intellect can master a complex idea without the aid of some temporal sign. In the mind of nearly every worshiper exists a picture or image for practical purposes—a necessary result of mental processes."

"Initiates," says Prof. Parsons, "sought to bring within the reach of the humblest minds the fruits of the most difficult sciences. Their real end was to speak to latest descendants and establish the unity of the consciousness of humanity."

And Flammarion adds: "The mathematical astronomy of schools is not yet definite knowledge—figures are not an end but a means. Astronomy's aim is not to show specks nor weigh moving stones. Without Life the planet would be devoid of interest. Mathematical will yield to physical astronomy and to the true study of Nature. After making us know the Earth is but a city in the celestial country, and man a citizen of heaven, she will disclose the Plan on which the physical universe is constructed; and that material form is but appearance while the Real Being consists of imponderable, intangible, *Invisible* Form. Our body is transformed gases—none of our flesh existed three or four months ago—shoulders, face, eyes, mouth, arms, the entire organism is but a current of molecules, a ceaselessly renewed Flame or River. To this force we may surely give the name Soul. Phidias is but a coarse imitator compared with this force which can construct the human body. But this force is immaterial, invisible, intangible, imponderable, like the attraction which lulls the worlds in Universal Melody, and the body (however material it seems) is a harmonious grouping by the attraction of this Interior Force. We are souls clothed with Air! Every one is called to receive the Light. Every one is thirsting for it—especially the humble, those on whom fortune frowns—for these *think most, are eager for knowledge*, while the contented ones of the century do not suspect their own ignorance and are almost proud of staying in it. But the light must be diffused through the world to the masses. That will be its most beautiful mission!"

LEAVING, then, these foretastes and premonitions of coming truth, shot forward upon us from ancestral civilizations, let us turn to our latest modern axioms, the words of a clear modern metaphysician, that "If man knows that there is no such thing as solid matter, but only detached molecules held together by immaterial force, and that the only abiding part of man's being is the psychic force which is responsible through bodily changes for the deeds done in the body, he will regard his ego as the conscious unit of force by which his identity is preserved through all bodily changes, and as inseparably bound to a solar or cosmic Ego, precisely as his body is bound to the solar system."

Constituent molecules of inorganic substances are not thought by science to be rigid or immutable. Prof. Thompson claims that one atom or corpuscle is constantly detached from molecules of matter, to wander through gas, liquid or solid, while another corpuscle takes its place in the disrupted molecule, thus bringing about continual exchange and carrying with it that form of Motion designated as electrical discharge; and that this continual splitting and building of molecules may constitute life in both inorganic and organic matter.

An article in one of the New York dailies written lately on Van Schron's discovery of living crystals claimed that no fact found could be more startling or of greater effect in harmonizing physical and ethical principles, because it furnished the missing link between the mineral world which was thought to be dead and the animal world known to be alive. The question why dead matter should *arrange itself of its own accord in such Beautiful and Symmetrical Forms*, could not be answered until

the German savant clearly proved that the force at work in crystallization, as in flowers of the field or feathers of birds, is Life. Van Schron first saw living crystals (probably formed by all bacilli) in 1886, the first being the living Double Pyramid of the bacillus of Asiatic cholera. Every known crystal is composed of numberless microscopic crystals of the same Form. All the bacilli and cocci examined *form living crystals of different crystalline Forms* (such as Square, Rhomb, Bayonet-shaped Rhombs, Prisms, etc.) To watch these living crystals is to intrude on Nature in her most secret place. The process is slow; much slower than with mineral crystals. At first the field is clear liquid; then comes the cloudy thickening phenomena in *flower-leaf patterns* which is called "ice flowers." Then a *Right Angle* appears, followed by another diagonally opposite; then others appear and, like magic, a Cube is before one's eyes! This is a cube of living albuminous matter, colorless, structureless, and perfectly homogeneous. The moment it is born it starts of its own accord to become a mineral crystal as rapidly as it may. This process takes from twenty-six hours to twenty-one days, according to conditions, and may be indefinitely prolonged. The living crystal may be kept living for years, like a microscopic pet. As it alters to the mineral, the matter in the cube first becomes granular, then molecular, then atomic, the so-called molecules dividing each *in two*. Then two kinds of *wave motion* begin. One is longitudinal, forming waves along and *parallel to the axis*, and moving in succession to the sides. The other is *spiral*, beginning at one end, and setting all the atoms in motion in a Symmetrical Spiral movement (clearly visible). The longitudinal waves seem to be seizing upon one kind of matter and carrying it out of the crystal, leaving what is called "mineral." These two movements appear to shape the crystal. Before your eyes the whole Shape changes; corners are lopped off, sides are beveled and the Cube becomes Prism, Pyramid, Hexagon, as the case may be, but always alive! Some are very active. A living baby crystal swims away from its mother with the same *spiral rotary motion*, and in absorption, inclusion, refraction, polarization and all crystalline properties, the living crystal is identical with the mineral one we know. To these facts the writer adds that: "Mountains, rocks and soil are crystalline; water is crystalline at freezing point; the air will probably be proven crystalline also. Given the infinite ether which is a known fact, a given Life-force acting on it as on these crystals, compressing, moulding and shaping them in *intelligent Beauty and Order* and the idea of *Divine Will* is conceivable. The idea of life necessarily includes the idea of will. The general law of Nature is the control of matter by Spirit."

To this powerful truth may be added the corollary which Dr. Charles R. Keyes gives in a late article on geology: "The President of the Geological Society, London, would have the barriers between the mineral and the organism wiped out. In the rocks are going on changes analogous in nearly every respect to those we ascribe to animals and plants which we call cells, each leading a more or less indifferent existence. Each has a distinct *personality*, follows a more or less individual existence and changes as surrounding physical conditions change. The life and changes in the organism and in the rock are not only much alike, but are, in all probability, merely different expressions of the same great laws. Then may we consider not death but life as omnipresent and everlasting—existing wherever matter manifests itself."

An atom is supposed to be spherical (though it may vary in form) and to be urged on its orbit by etheric spirals, themselves possessing form, attraction, elasticity, momentum and energy, to which are given permanently different degrees, by difference in their thickness or rates of rotation. The distance and rates of vibration differ infinitely, many of the more subtle (as the Röntgen waves, human magnetism, etc.) being only lately studied with care. Each atom appears alive and *accumulating experience*, the outcome of which probably is Consciousness rising to higher and higher splendor! Each has individual energy, and more when alone than when combined,—ability to combine being conditional and circumstantial.

The eight or more kinds of atoms that have been isolated, identified, and recognized as identical among their class, are termed elements, and as yet have not been converted into each other on earth, though spectrum analysis claims to find them being created and converted in certain nebulæ; and all may be varieties of a few or one great Primary—as are colors, forms, and motions of force—ripples and wavelets of one great Sea-of-Life!

The formal ideals that these atoms subsequently seek, with the mechanical distribution they effect to attain their ideals, and the various ascending functions they develop for higher and higher manifestations, constitute our visible world of divine, natural and human *ART*—forever bespeaking Intelligence and Soul to direct it.

THE STUDENT must remember that he himself and the forms about him are not literally solid substance, but clusters of balanced atoms held in spiritual relations of space, etc., by spirit force; and he should *spiritualize and idealize* his canvas or paper to simulate, to the vision, these space relations. *Its surface should not look flat and dead to him, but full of life and perspective.*

The actual atoms do not touch in space, for they are in rapid vibration within interstices which may readily expand or contract. Visibility or invisibility is merely varying lengths of vibration. The door from spirit to matter is ever open! A ladder-of-life by which man climbs to meet his Creator, as in Jacob's vision, actually exists, uniting heaven and earth; up and down its steps or stages of progression Angels of Being are descending and ascending progressively from etheric to gaseous—to liquid—to solid states. Their mission to descend and organize seems forever accompanied by a love-of-home, returning them to primordial elements when their work is done. "Art," said Elizabeth of Bavaria, "is a creation of our desire for a supreme existence, born of *home-love* for the unique Fatherland, and divines its celestial forms."

Thus, man's bones absorb the atoms in *Solid* form; his blood, the *Liquid* form; his lungs, the *Gaseous* form; his mind, the *Etheric* form.

Phenomena grow more complex, but there is order and principle in possible phenomena. First, Gravitation, then Heat, then Chemical Affinity, then Molecules, Crystals, Protoplasm, Organization, Consciousness, and all these were once latent in a "dust" cloud! The heavens teem with worlds growing before man's eyes from cosmic dust condensing, and the wondrous life and forms symbolically suggested by the zodiacal astronomers of old become realized and visualized—with even deeper meaning and grandeur—by modern telescopes.

Cries Emerson: "To their own purposes all things advance; gases gather to the firmament; the chemic lump arrives at the planet and grows; arrives at the quadruped and walks; arrives at man and thinks! Man, made of the dust, does not forget his origin; and all that is yet inanimate will one day speak and reason. Unpublished nature will have its whole secret told."

And the poet Edward Carpenter adds: "I saw, deep in the eyes of animals, the human soul look out upon me. I saw where it was born deep down under feathers and fur. I caught the clinging, mute glance of the prisoner and swore that I would be faithful. Thee, my brother and sister, I see and mistake not. Dwelling thus for a while fulfilling thy appointed time, thou shalt come to thyself at last. Come nigh, little bird, with half-stretched, quivering wings,—within you I behold the choirs of angels and the Lord himself in vista!"

This reminds us of the cry of that earlier English poet-artist Blake: "I do not behold the *outward* creation. For me it is hindrance not action. I question not my corporeal eye any more than I would question a window concerning a sight. I look *through* it—not with it. 'What,' it will be questioned, 'when the sun rises do you not see a round disk of fire like a guinea?' Oh, no! no! I see an innumerable company of the heavenly host, crying, 'Holy, holy, holy is the Lord God Almighty!'"

Says Flammarion: "Suns of infinity rush through space with inconceivable swiftness, but these velocities are the very conditions of the stability of the universe; stars, earth, planets,

worlds, suns, stellar systems, star clusters, milky ways, distant universes, sustain themselves by the mutual equilibrium of their reciprocal attraction. They are swung in space on *ideal* orbits, and balance centrifugal with centripetal tendency so as to remain in perpetual (though unstable) Equilibrium."

Science clearly shows us that "gravity, cohesion, chemical affinity, heat, light, sound, electricity, become vibrations of the same great Force, which is itself the Rhythmical-Activity-of-Being. But while ceaseless variation would be chaos, fixed and organized variation makes Cosmos. *It is the Order and Intellect of ART, giving interest and delight to all.* Thought itself is mental and balancing energy, changing its own cellular forms, and transforming and transposing the relations existing between transitory oscillations; altering polarities, magnetizing or demagnetizing all existing things."

BUT MAETERLINCK well says: "Thought of itself is not so important as the Feelings awakened by thought, that ennoble and brighten life; and the *Love we bear Truth is more than Truth itself.*"

Nature fills us with divine Feelings as well as thoughts, and generates their marvelous pulsations within our hearts, which make the highest quickenings of our souls.

"Conscious thought," says Prof. Batchellor, "is not all of mind, nor even the greater part. Thought activity may be likened to the waves rolling on the ocean's surface. Far below lie silent depths whose strong currents sweep onward in their course, beyond the range of our observation. Down in the unconscious depths of our soul Music sways the currents of our lives. Between the two spheres of conscious thought and unconscious volition lies the realm of the Subconscious; here we have to do with the intuitional faculty, where we arrive at mental conclusions without apparent processes of thought. We may partly explain intuition by saying that, as inherited accumulation of habit becomes instinct —so accumulation of mental conclusion becomes intuition. Music strongly appeals to intuition. We may be ignorant of the structural Form of music and yet deeply stirred by it. Intuitively we grasp its meaning and something within us vibrates in sympathy with the strain of Harmony. Science proves that tones are in harmony with each other when they have a large proportion of coincident vibrations. Whereas if their numbers do not so well agree, they sound discordantly. *Harmony means kindredship—discord means estrangement.* But what shall we say of that wonderful mathematical faculty within us, which can, at the same instant, count up the vibrations of several tones, thousands in a second, compare them and accurately note coincidences and differences? Compared with this the most wonderful feats of lightning calculation are insignificant."

This special power of lightning calculation shows us (like dreams and telepathy) the presence of an under world of unknown reach and activity close to us, yet just below and above consciousness, leading us "like lightning" along the track by which we came and are advancing.

THE ACTUAL lobes of the human brain apparently divide toward front and rear, so as to throw forward into the cerebrum the faculties of directorship, ideality and government; but throw rearward into the cerebellum the faculties of memory, intuition, historic instinct and even passive restoration of vital functions—as in sleep. The forward and larger brain gives higher forehead and cranial dome, distinguishing the intellectual, idealistic and progressive races, and seems to expand with expanding knowledge and free will. The smaller brain (or cerebellum) associates man's mind with all stored experience and progressive intelligence in the kingdoms of life below us, and if we look into the actual brain-changes of the beasts, before man, we find them gradually enlarging the relative size, proportion and activity of brain function and raising the brain more and more from prone degradation—upon horizontal earth planes —to upright, perpendicular dignity and elevation. (See Lesson XXXVIII.)

The true grandeur and sublimity of man appa-

rently became possible (as distinct from all life below him) at *that hour and point of his development when his stature became upright and his brain sufficiently advanced to comprehend itself as Spirit, and to look upward sympathetically to heaven or downward deprecatingly to hell.*

"No other animal," says Prof. Orton, "habitually stands erect. The horizontal fish has in man become vertical." Or, as Ovid explained, "While the mute creation *bends downward*, man *looks aloft* and with erect countenance turns his eyes to heaven and gazes on the stars!"

"To speak truly," says another writer, "there has been in the world but one religion—which is the *Aspiration* of man toward the Infinite." And Emerson adds: "A poetic anatomist of our day teaches that a snake being a horizontal line, and man being an erect line, they constitute a right angle; and between the lines of this mystical Quadrant all animated beings find their place."

There is an old tradition among the Tlaxcalans of America that, after the deluge, men who escaped the flood were transformed into apes (that is, were mere material externalists and mimics in their attitude of mind), but that they gradually recovered their use of reason and speech, *i. e.*, the powers of inward appreciation, perception, and arts of self-expression.

The reality of the above premonitions, and the tragic force of that age-hallowed tradition asserting that soul must rise from monkey-hood to manhood by the powers of increasing consciousness, intellectual appreciation and spiritual self-expression, become luminously forceful and comprehensible as we study Form Evolution and classification in the subsequent charts; and as we discriminate sharply between art methods which are merely mimetic from those which are interpretative, poetic and vital.

IN CHARTS XII. and XXXVIII–*a.* we see the steady growth upward of lower and horizontal lives to the more *aspiring* and *upright;* and not only the ascent of head itself (or cephalization) from grosser sizes and degradant proportions to nobler capacities and loftier types, but the steady victory of the brain portion of the head over the lower and bonier prognathous portion of the jaw; and even the forward portion of the brain over the rearward portion.

Prof. Batchellor claims that it is now known that the brain comprises a number of specialized centers of intelligence, with nerve fibers stretched from one to the other; that the auditory center occupies a middle position in the brain, and seems a main office through which other special centers communicate with each other; and that this tends to confirm the Greek regard for Music (in its larger sense) as the keystone of the educational arch. He calls attention to the fact that the law of polarity in the magnetic oscillations of atoms was discovered at the same time as the complementary attractions of the fourth and seventh tones in music; that latent tone runs through all nature, from the humblest grass blade, the zephyr, Æolian music in the trees, bubbling brooks and tinkling drops, murmuring sea shells and shores, humming insects and warbling birds, up to the mighty tempest, or voices and instruments of men and angels.

Motion also becomes qualified by qualities of instrumental fiber, and the Orientals recognize these nature-tones in the pitch of their instruments, though their knowledge of organization still lacks the fourth and seventh notes. "Everywhere is indwelling tone waiting to start into action, ever striving to express itself through hindrance," and growing richer with freedom, more sympathetic with keener vibration—just as atoms seek larger room for action and generate heat in swifter activities. "What does this mean?" cries the above writer, "This universal music, so like a voice speaking out of everything, must have deep meaning. All nature is a mighty parable! Music in the particles, music in the globes! We see her moulding atoms, planets, systems, by her Law-of-Harmony."

He helps us by showing that musical tones are regularly-timed vibrations; that rhythm is music to the vital sense; more rapid vibrations produce Tone, *i. e.*, Music to the ear; more rapid vibrations, still, produce Color—to the eye. Music is

organized movement, the beautiful in Time. The human individual epitomizes this progress as a child, beginning with an unconscious cry; as intelligence awakens he finds expression in tones; then ideas connect these in sentences; wider swing of melodic inflection shows feeling.

MUSICAL expression requires human agency. Music is different tones organized by relative pitch, force, duration, into melodies and harmonies. Nature overflows with the raw material of music, but human Art *organizes* this into musical strains. Here, if ever, man is face to face, ear to ear, heart to heart, with God!

Rowlands writes that: "Many of Paganini's admirers warmly upheld their opinion that he was in reality an angel sent down to this world, in pity, for the purpose of lightening the miseries of earthly life by giving man a foretaste of what the heavenly harmonies will be hereafter. They said that it was as if a choir of sweet-voiced spirits lay hid within the instrument, and that at times it seemed as though this choir turned into a grand orchestra. Another swore to having seen a tall, dark shadow bending over him at one of his concerts, directing his hand; while a third testified that he had seen nine or ten shadowy hands hovering about the strings of the great master's violin."

Tartini discovered the combination tones (the so-called "third," or Tartini's tone). This discovery—a lasting and valuable acquisition to all later investigations into acoustics—led him further and further, but apart from the exact road of natural science into the regions of mystic philosophy. And he taught that with the problem of Harmony would be solved the mystery of Creation, for *Divinity itself would be revealed in the mystical symbols of the Tone Relations.*

To-day we discover (as shown in the frontispiece, and in Chapter VI.) that not only are Force, Form, Color, and Music primarily correlated, but that as force passes out from the Square into the Circle by way of the Cylinder, Cone, and Conic sections, *Music is really born.* The tonic, subdominant and dominant tones of the sound scale are found to *correspond mysteriously* with Cylinder, Hyperbola and Parabola—relations of FORM. A cavity shaped as cylinder with spheric termination offers measurable resistance to the Tonic sound; while shaped as hyperbola it resists the Subdominant; and as parabola it resists the Dominant.

Hence we feel the force of the scientific statement that "the quest of music is the study of human mind in its most exalted moods. In the process it is beautiful to see how the ear listens for coincident vibrations, and ignores non-coincidences. This feeling forth of mind for harmonic relations is shown by the structure of the scale, which is formed upon a chordal basis—through long centuries built. Singers of old seem to have known nothing of modern harmony, yet, guided by fine intuition for harmony, they selected tones we have grouped in natural chord relations. Logical development of the intuition in music involves study of emotional contents of the scale. Each tone has its own *personality*, and though it may pass through change of Mood (by pitch, speed, force and grouping) it retains its unmistakable Identity. As we gain musical insight, the tones of the scale resemble *outward projections of our Inner Life.* Music voices the spiritual in Nature and human nature; bears witness to something Above and Beyond; quickens vital impulses, intellectual activities, spiritual aspirations. Its meaning grows grander as we rise in the scale of Being."

Says Prof. Serviss: "The planet Venus is exceedingly splendid! She has water and air like earth; is nearer the great dynamo sun. To live on her is probably to live in a world of marvelous luminosity and unimaginable play of color. Telepathic manifestations, the apparent intercommunication of mind with mind, may have electric origin. In a world where light is more abundant and brighter than on earth, the sense of Harmony may be developed on a higher plane than sound. Even we can recognize an *affinity between the musical scale and the gamut of colors in the Solar Spectrum.* Why may not Venus be a place where the rhythm of light waves enacts the part played for us by the melody of sound waves, and where a

concert of prismatic hues, with swift and varied interplay of harmonious tints, produces even a nobler pleasure than that we derive from most excellent orchestras? The imagination has always been a torch for the stumbling feet of advancing science, and frequently its flickerings have given the first revelations of hidden truth."

Thus we learn the lesson of Solomon, at last, that "He hath made every thing Beautiful in his Time." Hence we find a crowning glory to the opening century, that our human mind is permitted to catch unmistakably the harmony existing between heaven and earth, and discover the astronomical fact of much symbolic beauty that our whole "lost world" and all its solar system is speeding rapidly toward the constellation of The Harp; and that (sublimer still) the celestial powers within man's soul, for artistic principles, suffice him fully to comprehend and coöperate in that universal harmony.

Prof. Dolbear strongly states, in a recent article along similar lines, that the real magnificence of the universe surpasses man's conception, yet to be able to weigh and determine its physical characteristics, velocities and directions, implies that man is one with the intelligence of the universe, for the laws he finds are universal laws. And Leibnitz had said long before, that: "In the present plan of the universe there is the greatest possible Variety with greatest Order and Unity. The grandest effects are produced in the simplest ways. Even in the outer world of phenomena the more we penetrate its depths the more we find inimitable Beauty and unimagined Order and Wisdom." "The more," says Topham, "that we comprehend these Basic Laws established for our welfare, the nearer God comes to us, and through their workings we recognize his Presence."

WE HAVE tried to gain this insight into the mind and spirit of the Mighty Master, before watching him set his cosmic Potter's Wheel spinning out visible forms to teach us his principles of Motion, Direction, Measure, Proportion, Balance, Rhythm, Cadence and Harmony, alike for Form, Color, Sound or Sentiment. All forms unfold in splendid succession, leading each other up the scale of celestial attainment! All are atomic, yet all are spiritual,—not so much the atoms as the thoughts and feelings. Not the surface, but the Soul of things. Though even then, so utterly alive is every atom and penetrated by thought that humble fibers and material textures are all included in the beauty of the whole.

Each form is harmonic within itself and in all relations to natural environment, from the mollusk all the way up to man.

The archangel's trump, the seraph band of "harpers harping with their harps" is a summons—not to chaos, but to order and beauty!

God is harmonic, and all his laws are uniform. He is *consistent* throughout all space and time. He commands order because he *is* Order. Hence the principles and laws of Harmonics are one and the same for all space and time, and they employ abstract but essentially identical Form-Reasoning for all planetary or stellar life everywhere.

Our star is a key to all stars; our music and art to all Art Universal. The same geometric and chemical properties (with number, quantity, molar motion, etc.) apply to them as to us.

Our flowers are perfect expressions of their God. Ours are identical, in essence, to theirs.

The celestial harps will be the same, though the heavenly hosts whom no man can number may infinitely vary the sacred themes and combinations.

MR. SYMONDS mentions a truthful intuition of Michael Angelo's which our book will try to demonstrate clearly, viz., that: "Buonarroti seems to have intended to prove that the human body itself has a language inexhaustible in symbolism. Every limb, every feature and every attitude being a word full of significance to those who comprehend, just as music is a language whereof each note and chord and phrase has correspondence with the spiritual world. He himself wrote:

> "'Nor hath God deigned to show himself
> Elsewhere more clearly than in human form sublime,
> Which, since they image him, compel my love.'

"Therefore, to him, a well-shaped hand or throat or head; a neck superbly poised or an athletic chest; the sway of the trunk above the hips; the starting of the muscles on the flank; the tendons of the ankle; the outlines of the shoulder when the arm is raised, and the bending of the loins; the curve of a woman's breast; the contour of a body in repose or strained for action; were all *words* pregnant with profoundest *meaning*, whereby fit utterance might be given to the thoughts which raise man to God. Paint or carve the Body-of-Man, and as you do it nobly you will give the measure of both the highest thought and most impassioned deed."

We close this important chapter—in which we try clearly to connect the living, vital realm of spirit and ideal with the harmonic world of sense—by the fine thought of the French socialist Fourier, accompanied by one on Beethoven:

"When mankind knows the beautiful results that will come from complete development of the five senses; when it knows how the affections of friendship, love and family can be intwined with the Three Primary Mental Powers, making the *Twelve notes of the Musical Scale of Life* (including tones and semi-tones); and when they are duplicated by higher and lower octaves of feeling (each note passion brought into Harmonic Relation with all others); then all human hearts will burst forth in spontaneous praise to God for Life—so filled with pleasurable bounties and emotions! And the confirmation of this higher Form of society—the Harmonic Order, the Love of God—will become the most ardent love of men."

While Beethoven in his Ninth Symphony is said to have "seized the central mood, root emotions and feelings from which modern democracy springs, in a melody of such simplicity, freedom and loving human equality as to include *all* mankind; a gladness so assured as to turn the edge of fate, and of such firm energetic tone as to fit it to be sung by large *masses* of people, a choral of the New Commune"!

"To Fashion's—Custom's discord;
To the mad Babel din, through deafening orgies;
Soothing each lull, a strain is heard—just heard—
From some far Shore, the final chorus sounding.
Is it a dream? Nay but the lack of it the dream;
And, failing it, life's lore and wealth a dream,
And all the world a dream."

—*Walt Whitman.*

THE BUDDHA BELL

I AM The Buddha Bell—
That was born of a song and a sigh.
My strokes the long ages tell
As the children of men go by.
I breathe in the air and the sky,
My notes are the century's roll,
I bend to the low and the high
And harken to Nature's Soul.

I am The Buddha Bell—
My heart is of mellow bronze,
My worn old sides reflect
Her flowers and leaves and fronds—
I glance to her waters below,
And gaze on her stars afar,
While my vibrant chords outflow
Without a single jar.

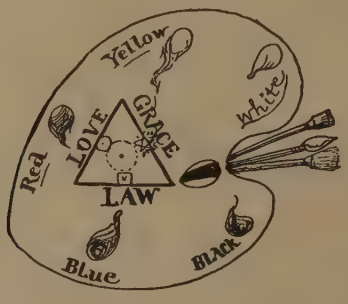
I am The Buddha Bell—
With deep voice, soft and low;
I know Life's mystic spell,
Her tones as they ebb and flow,
Her choirs of Heaven and Hell,
Her anthems of earth and of air
Are caught in my bosom's swell
And rung to Eternal Prayer!

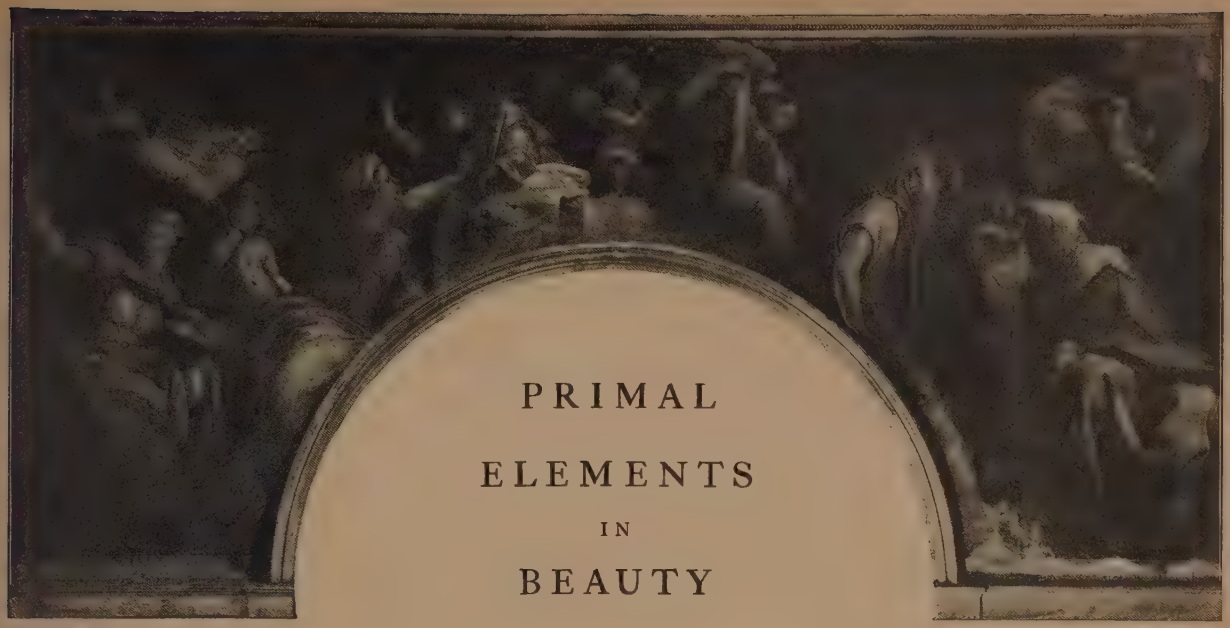
CHAPTER V.

SPIRIT-CONSTRUCTIONAL

GEOMETRY AND NUMBER

"He bringeth out their HOST by NUMBER: . . . not one faileth."—*Isaiah.*





RAPHAEL'S "SIBYLS" VATICAN FRESCO

PRIMAL ELEMENTS IN BEAUTY

QUINTILIAN tells us that the ignorant may enjoy Beauty but the educated *understand the reason* for the enjoyment, and so (we might add) obtain the light to enjoy it rightly and intelligently—in harmony and sympathy with its Author.

We must meet the demands of a broad theme broadly, and our modern age calls for the subject of Beauty being classified properly with all other sciences and treated largely and nobly upon all its sides, material, intellectual and emotional—as man himself is a material, intellectual and emotional being.

"What we understand by the kingdom of God," says Giles, "are the Principles in their Forms, Modes of action and mutual Relations, just as we speak of the mineral, vegetable and animal kingdoms. The vegetable kingdom is something more than the aggregate of all plants; it consists in the principles, laws and forms of vegetable *growth*. So the kingdom of God is not a mere collection of men and women, but comprises all the elements of the divine nature."

Pascal adds: "A principle thrown into good ground fruits as a grain thrown into good soil. Everything is created and conducted by the same Master—the root, the branch, the fruit—the principles, the consequences."

And Müller assures us that: "We ought to know how we have come to be what we are, that we may advance to higher attainment. Not to know what *precedes* is to care little for what *succeeds*. Life would be a chain of sand instead of an Electric Chain that makes our hearts tremble and vibrate with the most ancient thoughts of the past and the most distant hopes of the future. We are what we are by the toil of intellectual ancestors. We know now there are stages of growth, not determined by accidental environment only, but by original purpose, to be realized in the history of the human race as a Whole."

In reality, it is these underlying principles and methods that fascinate the soul in all study of life phenomena. If we witnessed life by itself, to note its vicissitudes or cataclysmic close (called death) without perceiving elements of hope, harmony and law, we should cease to care for life—it would be an insane "Dance-of-Death." But soul, and life itself, is revived by the discovery of saving principles capable of personal and social application. It is imperative to the individual to possess them in order to possess him-

self; and to society to possess them in order to possess the individual. A society without principle is the enemy of the individual; an individual without principle is the enemy of society. Vital principles control the individual for his own sake, though he be a Crusoe on a desert isle; and they control him in the collective social state for the sake of the spiritual institutions he embodies.

Religion is not a craft for the preservation of priests, bigotry and sect, but a spiritual relation toward our Creator and a preparation for Heaven, (which is a *State-of-Soul*—on this planet or other). Statesmanship is not a diplomacy for knaves and thieves, but a just correlation of individual and social interests. Law is not a quackery for juggling with justice and the perversion of equity, but the discovery, establishment and execution of Eternal Right.

It is so, too, with Art, in the noblest and truest interpretation. Art is not an exploitation of ignorance and crudity by fads, crazes, fancy fashions, technical tricks, but the sane and broad development of good taste and skill through the knowledge and practice of illuminating Principles.

But in each of the above cases, the logical right that a principle has to control man or men is that it existed *before* man did, and was *more important* than he to Cosmos.

The kingdom of Heaven, then, is indeed as a seed—an ideal germ—planted intelligently and designedly in illimitable space, that sprang up man knoweth not how, but he can and does know some of the order and consistent method of that vital growth, viz., that it is as Scripture says:

> "First the Blade [or structural laws of support],
> "Then the Ear [or evolutionary vortices of progression and environment],
> "After that the [radiating] Full Corn" of diverse individualities and special adaptations to local purpose; out of which emerges the splendid Flower and Fruit of perfected design that so strangely contain a capacity to continue their immortal ideals by self-creation in new seed.

Beauty was latent, or imperfectly revealed, all along the way. The universal Spirit was present and active in all and at every step. God declares himself a worker, an Artist-Artisan, and proud so to be. "My Father worketh hitherto, and I work," says Christ. We need no higher authority for the Dignity-of-Labor. That mysterious Spirit in whom we live, move and have our being; in whom, of whom and for whom are all things, takes pleasure in self-expression, through matter, to the human children he is creating. "The Lord shall rejoice in his works," sang David, even as "there is nothing better, than that a man should rejoice in his own works," declared Solomon, his wise son. "All things are full of labor; man cannot utter it." "God answereth him in the joy of his heart."

STILL the Creator *idealizes* before he acts—and plans before he executes. Then he executes by *successive* stages of attainment.

In the bosom of the rose seed is the whole ideal, yet it roots before it bears. Again, each seed has its *own* ideal—to every seed its own body, because the body becomes the external expression of internal spirit. Here is eternal Individuality.

A lily slumbers in the same soil as the rose or daisy yet how different their dreams, their ideals! Still they obey *like* process in attaining those dreams; they observe *like* principles in the attainment of beauty.

To say whether one is more beautiful than the other would be difficult, but we could be sure its beauty would depend on like elements. Each flower would be found original and self-expressive; each would be consistent and continuous in plan; each orderly in stages and steps; each proportionate and harmonic to metric scales, standards and types selected individually at the outset; each would seek Symmetry and Equilibrium (however freely and gracefully attained through suggestiveness rather than literalness—by spirit more than by letter); each will culminate in expressive and appropriate Composition, Color, Texture, Fragrance perhaps, and certainly in Style; and each will be sure to carry

on its ideals by immortal transmission through its offspring. Verily we can see how much a philosopher and artist the Christ was when he stopped his followers to exclaim: "Consider the lilies how they *grow!*"

TOTAL expressional beauty will ever be found inherent in special significances implied in the energies of Motion, giving the fascinations of Direction and Tendency; then in the inner ratios and relations, setting the fixed Forms (which give constructive style and befit appropriate functions; then, perhaps, in peculiarities of Texture, Color, Scent and Sentiment, giving Character to charm; and, lastly, the added spice of Variety in composite clustering, or grouping, in the constant play and changings of Light. The way man handles these in his own arts of interpretation and adaptation superadd the human elements of personal feeling, selection, suggestion and technical skill.

On looking deeply into Beauty we shall find with amazement that the minutest gem, daintiest bird or dazzling flower, alike with grandest oak, loveliest child or boundless orbit of wandering star, derive the glory of their forms from inner ratios fixed in Geometric Law.

At the foundation of his knowledge man finds two mighty corner-stones on which to build the temple of intelligence and beauty. They are MATHEMATICS and GEOMETRY. Mathematics gives him the comprehension of infinite extension and infinite law infinitely extending through space. By geometry he discovers equal infinity and regularity in the relations of form and all form-reasoning; the latter becoming the universal language by which universal intelligence expresses its internal nature outwardly and visibly—a cosmic language that we noticed above must be common to the sidereal systems of space and to the gods themselves.

"God is a geometrizer!" cried an ancient sage, and if the inhabitants of Mars and Venus look out upon nature and upon us with the kindred interest that we do upon them, they see us careering through space upon mathematical lines and along geometric arcs of orbit akin to theirs, and identical with theirs in all form-analysis or form-generation. Their celestial alphabet is the same as ours, and some day, therefore, through it we may clearly communicate with them. It must ever be from the same great roots of thought that art (celestial or terrestrial) must spring.

"Plato's second sight," says Emerson, "explains the stress laid on Geometry, for he saw the globe was not more lawful and precise than was the supersensible; and that celestial geometry was in place there, as a logic of lines and angles are here below; and that earth was mathematical throughout."

In the poet Whittier's beautiful words:

"Above, below, in sky and sod,
In leaf and spar, in star and man,
Well might the wise Athenian scan
The Geometric signs of God,
The measured Order of His Plan.

And India's mystics sang aright
Of the One Life pervading all,—
One Being's tidal rise and fall
In soul and form, in sound and sight,—
Eternal outflow and recall."

We will find that this very rhythm, or rise-and-fall, between some mystic Duality in God, which balances and plays across his hidden Unity, is a law of life in contrastings and combinings of thought, force, form, color, sound, and all the wave vibrations and undulations that effect existence.

The great astronomer Hamilton once exclaimed: "The stars move all right—what interests me is the high science that accounts for their movements"; and ex-President Hill, of Harvard, elaborately demonstrates that the faith which prompts the scientific investigator to his labor may never be expressed in words but his actions show that it is an inborn ineradicable conviction that the outward universe is intelligible and shall some day be understood; that observation alone can lead to nothing without insight, without clearness of inward vision, which sees more than the outward fact—sees the Divine Idea which the fact partly embodies; and that

the course of history and science has been what it might have been had God intended to teach men the sciences, for there has been a constant presentation of simpler truths which led to the less obvious—that was essential Reasoning. He explains how, in the beginning, the Creator's spirit embodied in the universe those laws and forms of Motion which were best adapted to the instruction and development of created intellect. When comparatively easy problems were solved, more difficult ones were presented. Four centuries before Christ the mathematicians of Greece were lured into the study of conic sections, and this prepared the way for certain equations of second degree. These were sufficient for all obvious phenomena of astronomy and mechanics; and as demand for higher mathematics has been made by physics the supply was granted. Our human needs are various, and nature finds means to satisfy them all. The perfection of the divine workmanship is shown in the adaptation of each object in nature to a great variety of ends. The geometrical laws on which the world is built are adapted to all the wants of every creature.

THE UNIVERSE is composed of four great elements, *Spirit*, *Space*, *Time*, *Matter*, which by no alchemy can be transmuted into each other.

Number is a pure creation of spirit, an impress of original thought, and its constant suggestion in the forms and periods of nature is a clear demonstration that nature is the work of Intellect which controls space, time and thought.

Number is more prominent in chemistry;
Space is more prominent in mechanics;
Time is more prominent in biology.

All language bears witness to the presence of these *Three Ideas* in every thought. Take any word in any language and analyze it, and you will find some reference to number and motion (perhaps typical of spiritual things). Though number is involved in every act of consciousness, it is not the highest genus—it is a species of relation. Every act of finite intellect involves not only perception of number, but other relations. All knowledge results from relations established between phenomena.

By Number the relation of Quantity becomes amenable to thought and calculation. Imagination cannot take a step with any clearness, much less the hand build with any satisfaction, without referring quantities to a unit-of-quantity to which the ratio shall be that of two numbers to each other. Mystic charms—felt in the earliest ages—cluster around the odd numbers three, five, seven, nine, which seem to have individuality. Nature loves them.

Organic beings possess *Unity* absolute.
Sexes (of both plants and animals) give *Duality*.
Powers (within and above) are *Three-fold*.
Points of compass, limbs of mammals give *Four*.
Fingers of the hand give *Five*.

When waves of air give continuous musical tones, why should the ratio 4 to 5 give us pleasure, while those from 8 to 11 give none?

Dr. Hill's clear and concise statements upon these fundamental conceptions in intellect and order of natural manifestation are so valuable that one cannot do better than follow him fully where he shows how many of the geometer's a priori laws (such as Symmetry) were first suggested by the forms of nature. Natural symmetry—or Equilibrium—led man first to investigate the mathematical law which it embodies, then the mechanical law which embodies it. Thus all the benefits of our race, from the discovery of the keys of physical science, were bestowed through suggestions of geometric thought in outward creation. But in pursuit of mathematical knowledge man began early to investigate a priori laws, of which they had received no suggestion from nature, and the intellectual origin of the forms of nature was made still more manifest when these laws were afterwards found truly embodied in the universe from the beginning. For example: Plato's conic sections were found in the forms and orbits of heavenly bodies; and Euclid's division in extreme-and-mean-ratios (*i. e.*, the whole divided into two parts, such that the first is to the second as the second is to the whole). So the botanist

GEOMETRIC STRUCTURE IN JAPANESE DRAWING

[See next page]

THESE studies, from the sketch-book of the great Japanese artist Hokusāi, show how deeply and intelligently the more thoughtful Orientals divined the hidden geometry and structural analysis behind the outer shell or syntheses of Nature. They caught the guiding and supporting substructure, which made the external effects full of *vital* expression, character and significance. Without this *inner* penetration and comprehension, the artist is but half a seer, and is reduced to the superficial mimicries of the parrots and monkeys.

Hokusai lived to a great age, ever full of zeal, enthusiasm and generosity in his study and reproduction of Nature's wonders. He was a man of great character apart from his remarkable genius, and is said to have discarded all he did, before seventy, as "child's play," saying that: "At seventy-three I had, to some extent, comprehended the *structure* of plants, trees, fishes, insects, birds and animals. At ninety I shall penetrate the *mystery* of things and at 110 everything I draw shall be *alive!* There will be noble freedom when the soul, alone, untrammelled by body, walks abroad in the fields of Heavenly Spring!"

The native publishers of one of his sketch-books introduced his beautiful studies with the following introduction: "Art alone can penetrate the living reality of the things of this world, and the only art capable of such well-doing is the true art that abides in the Kingdom of Genius. The rare talent of the Master Hokusai is well known. . . . The things of Heaven and of Buddha [God], the life of men and women, even birds, beasts, plants and trees, he has included them all; and under his brush every phase and form of existence has arisen. For some time the talent of our artists seemed on the wane—*Life and Movement were lacking in their work*—but here, how admirable the sincerity and force! The master has tried to give LIFE to everything he has painted; the joy and happiness so faithfully expressed in his work are plain proof of his victory."

finds that two successive leaves, counting upward on the stem, stand at an angle with each other that is one-half, two-fifths, three-eighths of the whole circle, or some higher approximation to this peculiar Proportion which insures to each leaf its best chance for zenith light and air.

In the solar system the planets are distributed by close approximations to the same (philotactic) law, as the problem was the same, for they must be kept evenly distributed about the sun. These cases, which cannot be imagined as having any genetic connection, owe their intellectual relation to having sprung from ONE MIND.

SPACE and Time are without parts, and indivisible except by a mental act. This division is suggested to us by Motion. Force shows itself in matter by *moving* matter. That motion calls our attention to space and time. When we go out of ourselves and contemplate space, we carry time with us in the very act of our thought.

All natural forms conform to Geometrical Ideals sufficiently to suggest those ideals to men fitted to receive them, and show that the whole of nature may be regarded as a series of drawings and models in the school of life. Circle and ellipse are among the simplest of figures, defined by the simplest of laws; so God has strewn the circle around us on every side, and by the pictured alphabet of the heavens has called our attention to elliptical orbits.

All *regularity* of form (that is, studied adjustment of relations) is an expression of *thought*. Particles of matter take form in obedience to a force which is acting according to intellectual law. The laws which please the geometer most are those which give Symmetrical Figures—in which part answers to part, either on opposite sides of one line, or of one surface, or about more than one line or surface. It pleases savage and civilized, and even men whose ability lies in other directions. Our intellect craves Symmetry, we love it before we perceive the law—the sense of beauty is satisfied.

Perfect Symmetry belongs to the ideal, not to the actual. The algebraic conditions are exactly fulfilled by points of space in an invisible and eternal reality. The symmetrical forms of nature suggest to man the invention of laws of symmetry—at first simply to explain nature, then to anticipate nature's work. Thus the great mathematical sciences have been alternately the creation and the creator of physical science.

Physicists term mathematics a key to science, but the mathematicians have declared that Geometry is the science of space; Algebra is the science of time—the first subjects handled by the human intellect with sufficient freedom, vigor and precision to enable us to draw necessary conclusions. Whichever view is right, it is unquestionable that the highway to the temple of Truth leads *alternately* from mathematics to physics.

Time has but one dimension—into Before and After. In some respects it is richer in contents than Space. Symmetry in Time is the arrangement of two or more similar series of intervals to follow the same or successive movements. When the set of similar intervals follows the same movement it is Keeping-time; when it follows the successive movement it is Rhythm—unless the intervals are very short, when Keeping-time is Harmony, and Rhythm is Tone or Color.

All undulatory motion produces a symmetrical division of time. Symmetry in time gives us *MUSIC* in all its variety of forms and expressions. In music there is beauty as distinctly intellectual as that of geometrical figures. Harmony of sounds in a strain of music, harmony of tints in a landscape arise from harmony of times—in which the vibrations of the medium occur.

Color arises simply from symmetry of times, and is more expressive than form, for form appeals to the intellect, color appeals to the heart and emotions.

Beauty of color, like that of tone, arises from an implicit perception of Rhythm.

Colored Light itself has specific *qualities* of feeling and sentiment organically associated with its diverse vibrations, as also positive physical and hygienic properties affecting the health or moods of plants and animal life, for they grow

with wholly different rapidity or disposition under different colored light and are very much affected by the color of their surroundings.

Blue is a cooling, calming, thoughtful color—the hue of winter mountains and of the fathomless cerulean sky. It tallies with the severer square and rectilinear forms as the more scientific and serene element in artistic color-composition. Its sentiment is instinctively reflected in popular phrases such as "true blue," "pensive blue," etc. It is said to have in its effects that which corresponds to the chemical properties of purifying acids.

Red is more warming and exciting, and even empassioned in strongest presentations, and burns encarnadine the ruby, the rose, the lips and cheeks of affection, the fire of tropical plumage and costume. It is the color of affection and reproduction; and of the heart's blood; the color that preëminently symbolizes incarnate life, fertility and passion. Its form-correlatives would be the round and spheric.

Yellow has the brilliant, sparkling and cheerful quality of outdoor sunlight, gilding and adorning all nature with supreme splendor, gaiety and attractiveness. Its form-correlatives would be the radiate and starry.

If Blue properly typifies the pure serenity of truth and reflective mind of Science, Red responds to the warmth and generosity of heart in love, charity and Religion; while Yellow corresponds esthetically with the luminous and cheering elements of wonder, splendor, and inspiration in the vivifying genius of Art. From these three great Color-Primes the infinitude of commingled harmonies and color sentiments are born.

Heat also has its colors and tones, (as is seen by the sun's heat passing through glass—when ordinary heat is only reflected).

There is Rhythm, too, in the muscles of man and animals.

THE perception of beauty in outline is thought to be the unconscious perception of geometric law, just as the perception of harmony has been demonstrated to be the unconscious perception of arithmetical ratios in time—or algebraic law.

The beauty of outline in external form, independently of expression, is in proportion to the simplicity of the geometrical law, and to the variety of outline which embodies it.

In closer contemplation of outlines the attention is transferred successively to different points of the figure, and time is occupied by that transfer. Thus we come naturally and almost inevitably to regard the Line as the path of a moving Point, and Surface as generated by a moving Line.

A moving body (inorganic) moves in a straight line, forever, till deflected. The meteor passing earth at eighty miles per second bows to her as he passes. The moon is perpetually deflected by the earth; and the earth by the moon; and both by the sun; and the hosts of heaven move in rhythmic dance, wherein each star influences the whole.

A body at rest—free from external influence—remains at rest forever: therefore matter cannot move. Therefore the cause of motion in the universe is *something else than matter*. We are conscious that our own volition is the cause of motions we most narrowly examine. This consciousness is the foundation of our faith that motion has a Cause always. Our consciousness that we cause motion leads us to ascribe all change of velocity to force, and all force to Will. The same consciousness bears witness that all change of direction implies the influence of will. Weight, attraction, cohesion, repulsion, electric and chemic change, heat and light can be referred only to DIVINE WILL.

This faith is the base of all physical science. No man can extend a generalization beyond the particular instances from which he drew it unless he leans on this *consciousness of Cause*. Hence we naturally and legitimately infer that the motion we see is produced by a will independent of matter and superior to all phenomena. The essential interest in all phenomena, to man, is that it must stand forever as the artistic constructive volition of himself or of God; and that Will cannot die. Or, as Stallo puts it, "Force is persistent. It

cannot disappear without result, but must expend itself in some other manifestation, and so on. The prime postulate of all science is that there is some Constant amid all phenomenal variations; and science is only possible on the hypothesis that all change is in the nature of Transformation"—of artistic volitions and ideals.

We give many illustrations of the decorative and constructive beauty of geometric elements, later, but we must now specify certain peculiar esthetic properties in the elements of Number.

MATHEMATICS gives us three prime numbers of dominant significance and expression; where Unity (or Oneness) becomes lord and governor of all, recalling and centralizing into itself all contrasts and varieties, and calming and controlling the soul's concepts into simplicity and repose—which become cardinal principles in artistic composition. Duality (or Two-ness) awakens Contrast and Change and quickens the soul's analysis and judgment of superiorities. It introduces and compels the *measuring and balancing of differences* by the mental judgment, for equilibriums and symmetries, as we shall see exemplified later; while Variety (or Three-ness) compels Proportion, Gradation and Scale throughout all the marvelous scope of Variety-in-Duality-and-Unity, giving us the laws of musical meter or artistic composition. (See Lesson XXVIII.)

Everything at the heart of Nature is found laid in mathematics. "The very hairs of your head are all numbered"; "He telleth the number of the stars"; He "weighed the mountains in scales, and the hills in a *balance*." The concepts and conditions of number not only underlie the physical and chemical conditions of universe, but the very conditions of thought, feeling and beauty.

The atoms are but agents, yet their marvelous equations in number, and their orderly ratios in geometric form, become the key to all visible life or audible harmony.

The first Three Prime Numbers become as strangely potent and suggestive as the Three Prime Colors from which all compound hues are born; or as the Three Prime Forms, from which we will see all composite forms arise.

As number One is first and foremost in its concept of unity, origin, dominance, control (that simplifies, centralizes and sustains); and as number Three is its opposite symbol of variety and diversity; so number Two becomes the symbol of contrast, equilibrium, life-balance and "sex" (between these). We will find these three great numbers entering into all conditions of human thought, force, form, color, sound, or composition.

As unity reveals itself by the majesty and dignity of Uni-versal law, so will Duality declare its contrasts in terms of eternity with time; space with place; static with dynamic force; repose with action; rise with fall; spirit with matter; theory with practice; seed-time with harvest; life with death. But most of all, and most universally and strangely will the mystic number Three (the *Trinity* or Tri-unity of Nature—as the numeric symbol of Perfection—impress itself on the ages and experiences of mankind as being the most pregnant and harmonically beautiful number, since it contains in its bosom the possibilities and potencies that make it the most complete, all-rounded and suggestive number known to nature.

It is quite wonderful to note how vitally and eternally this numeric relation impresses itself on man, on nature, and even on spirit's essence—due to the immortality of the principles it contains, which spring to light as we study it. "There are Three that bear record in heaven, the Father, the Word, and the Holy Ghost: and these Three are One," asserts Scripture, *i. e.*, they are *phases* of One Central Being in Unity; three facets of One Crystal Prism! Just as there are "Three that bear witness" to the above, upon the earth; "Behold, I send unto you prophets, and wise men, and scribes," says the Lord; the first will be "killed"; the second "crucified"; the third "persecuted from city to city."

Pythagoras called Three the perfect number—the immortal number, as significant of that tremendous concept of life in

Beginning, Middle, and End,
Youth, Manhood, Old age.

"I am the Self seated in the hearts of *all* things. The Beginning, Middle, and End of all beings," says the Deity in "The Lord's Lay" of India.

Greeks and Romans alike recognized man as triune, in what they called

Anima, Umbra, Manes,

or, as psychology would say,

Body, Soul and Spirit.

They gave us also Three Fates, Three Graces, Three Furies, and recognized symbolically Three heads of Cerberus at the gates of Death.

Hindu penetration also saw the Divine Being symbolized by Three Heads—of Brahma, Vishnu and Siva; and there is the Brahmanic symbol of Three Threads of Life.

An English writer lately calling our attention to facts upon this theme, says: "No matter where we go we are confronted with that mystic number *Three*. It dodges our steps from the cradle to the grave with unequaled persistence." Through inspired literature we are struck by its constancy of purport and evident design.

The Sacred Trinity declares itself through

Three great dispensations
(Sinai, Calvary, Pentecost),
Three Persons in transfiguration,
Three dread Temptations in the wilderness,
Three mighty Prayers of deliverance,
Three sublime Replies to the tempter,
Three Crosses grouped, with
Three to suffer;
Three Hours of crucifixion, beneath a
Three-fold superscription;
Three Days of death in the heart of earth,
as Jonah's
Three Days' incarceration in the sea (of life)
and his
Three Days' journey to Nineveh.
Three Times Christ appeared to his disciples,
as
Three Angels had visited Abraham and Lot;
Three Voices summoned Samuel,
Three Javelins of Saul sought David's life,
Three Arrows of Jonathan delivered him.
Three Times Peter denied his Lord,
Three Times Christ challenged the apostle's
faithfulness,
Three Days was Paul kept blind,
Thrice was he stoned,
Three were the Men to whom talents were
given; etc.

Beneath the shadow of the solemn *Triangular* Pyramid with its symbolic human-headed Sphinx brooding from the dawn of time this answer of the ages, had also sat *three* prisoners-of-hope in Pharaoh's prison, dreaming *three* dreams which Joseph was to *triply* divine. So that in the latter days of Revelation the light breaks on us, at last, prepared for the beauty of that Sacred Three, of whose virtues—Faith, Love, and Hope—it was declared, "these *three* abide."

They run also through secular life and art with just as much persistence, echoing the earlier intuitions from highest to humblest connections: triple Tiara; triple Tridus of medieval "bell, book and candle"; triple crusading oath "to God, Virgin and lady love" (symbolic of Love, cosmic, social and personal); the Three Estates (social and governmental) with tri-foliate *Fleur-de-lis* as emblem; or Trident spear and "three days' grace" for judgment; down to the humble Druid altar where "three ways meet"; and folk-lore, song and story of "three fishers sailing into the west"; "three jolly sailors"; "three fiddlers of King Cole," etc., till everywhere these elements ask, "where shall we Three meet again?" and we are compelled to recognize them as nature's A, B, C, in the book of numeric life.

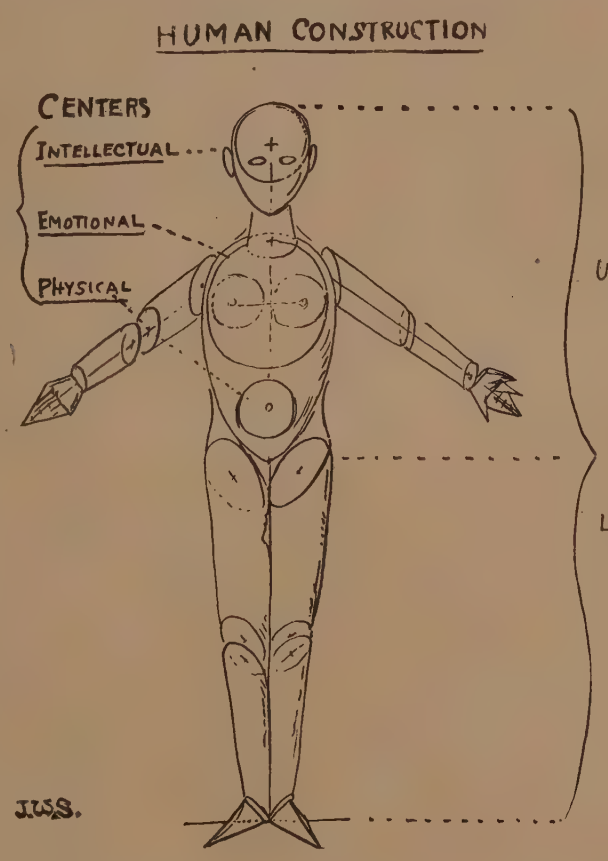
THIS constancy of portent becomes fortified and crystallized, in modern science, by discoveries of strange triunities at the Origins of physical as of metaphysical, spiritual and social life; and running through force, form, color, sound, soul and society.

Artist and musician, as much as physiologist, morphologist, psychologist, or sociologist, stand amazed at essential fascinations and fundamental characteristics within this primary compass of keys to infinite combination and expression; and at the significant implications of primal ideals and volitions, prime qualities of sentiment which pervade three-fold relations and conditions of Being, Thought, Number, Will, Force, Form, Color,

Sound, etc.; giving to art its great bearings (in analysis and composition) by

Right, Round and Radiate—motion;
Square, Circular and Star—formation;
Tonic, Mediant and Dominant—tonality.

Prof. Parsons says: "Of the existence of Deity, the holy church throughout the world (before the Advent as now understood) has always affirmed that the Creator existed in three persons, just as light exists in a triad of primary colors; and tone exists in a triad of sounds. Spirit is not limited to three persons of the Trinity any more than light is limited to the triad of color, or than tones are limited to the triad of sound. The ancient Revelation declared the existence of angelic hierarchies, below, corresponding to secondary, tertiary and subordinate hues and shades of color in the spectrum of light and to the secondary and chromatic sounds contained in the unity and trinity of each musical tone."



Generic man finds them again renewed in

Body, Mind and Heart;

through Physical, Mental and Moral realms; from Industrial, Family and Social centers. The individual man discovers that he carries this Triunity in the very structure of his body. His perpendicular physical rectitude (to horizontal ground beneath him) is kept in his framework by a spinal-cord giving unity and support to all his growth and action, and emphasized externally by *one* nose, mouth, navel and genital organ; while duality and symmetry is balanced across this by

Two eyes,
Two ears,
Two arms and hands,
Two legs and feet,
Two brains, lungs and breasts;

and this bilateral symmetry is accented again by a distinct upper and lower *half* to the body's height.

But a Trinity of three vital centers to his Physical, Intellectual and Emotional being reasserts itself clearly in

Abdomen,
Cranium,
Thorax,

where reside respectively the organs of

Generative Life,
Thought,
Feeling.

The abdominal center protects nutrition and propagation; the cranium protects brain and thought; the thorax protects heart and lungs; and these all are located in the upper and higher Half of man's frame, and are incapable of such amputation as arms, legs and features will permit.

The family organization reveals the tri-unity again of

Fatherhood, Motherhood and Childhood,

ever distinct, yet ever united. There will ever reign a dignity and strength in the central energy that sets the scientific law for physical life; while there will be an intellectual equipoise in the balanced judgments of rational mental life; and ever still a variety, play, diversity in the multiple surges

of emotional life. Each of which, severally, is reflected through the Fatherhood which supports the physical unity and back-bone of the home; the Motherhood with dual breasts that nurse and balance home education and economies; and Childhood with diversities of forms, features and activities that radiate the sparkle, vivacity and charm of home emotions.

So finally, too, the social organism is found to divide itself naturally into Productive, Distributive and Governmental functions.

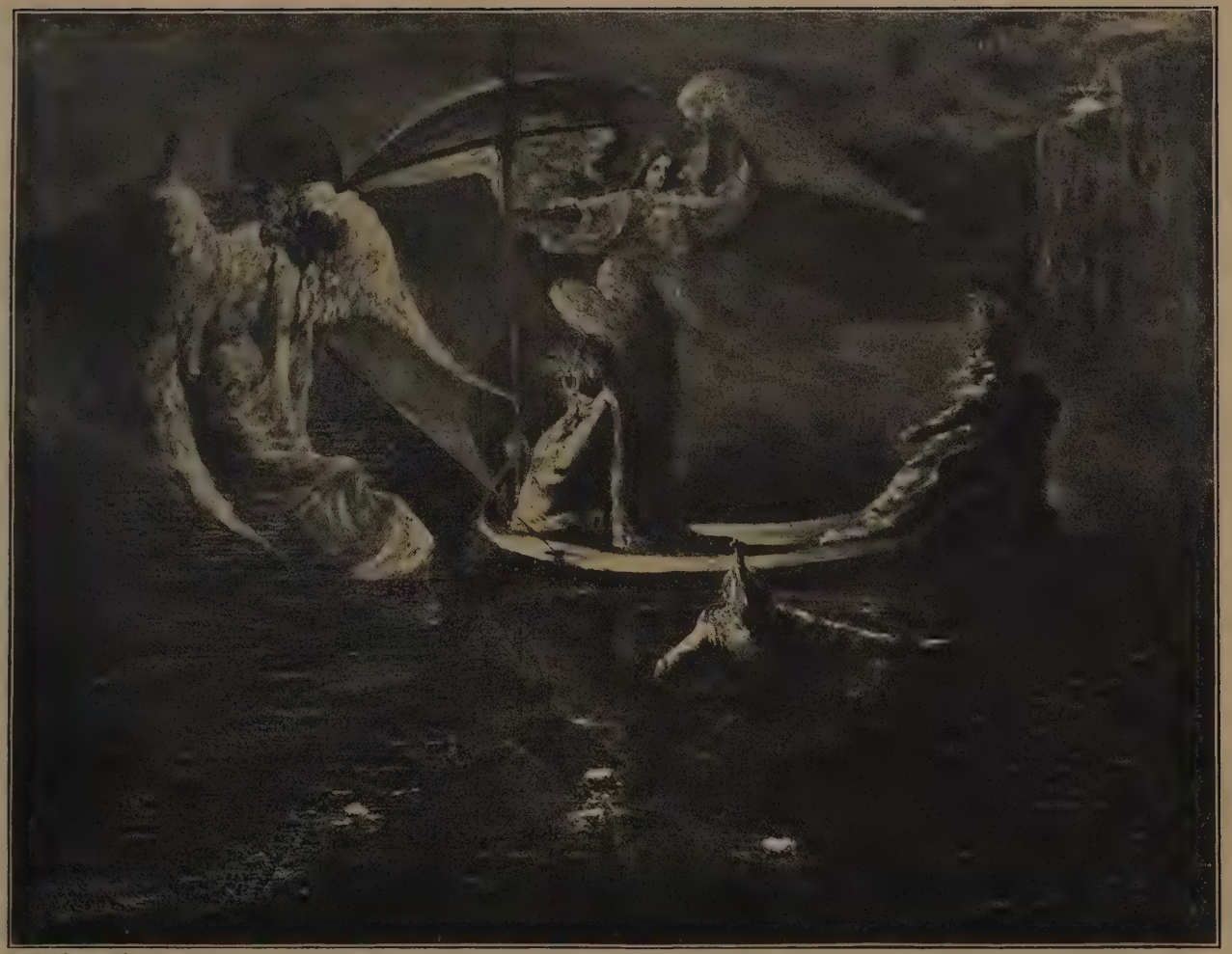
And we are not surprised, in closing our survey, to recognize this highest and most comprehensive principle, where Universal Spirit, in Three-fold emanations, cries, at creation's dawn, "Come, let Us make man in Our likeness," and then proceeds to reveal its marvelous personalities and life processes by three-fold dispensation, beginning with (1) the strong rigor of Law on Sinai's mount; then (2) bending to Submissive Love on Calvary's Cross; then (3) radiating to gracious inspirations, visitations and Diverse Tongues, to disciples on their way of life or to complex groups awaiting the "full coming" at Pentecost.

WE CAN gather up these broad and parallel suggestions into one simple classification of columns (as shown on the opposite page), in which Celestial Beauty, at every stage of natural progress, is found in the subtle contrasting, proportioning and unfolding of these cosmic elements and principles within us, around us, and before we ever were; and which have their grand and holy harmonies symbolized through every phase of physical vibration or ideal formation for expressional life.

Professor Serviss, reviewing the investigations of the French Academy of Sciences into Number, calls our attention to the fact that: "It is in things that nobody stops to think about, that genuine character can be read. Some instincts affect entire races and become distinguishing marks, such as the unconscious preference for particular numbers, found in different countries, stamped on their every-day life and manifest in their social, legal, political and industrial regulations. Prime favorites are 2, 3, and 5. Mohammedans make no use of 3 and it is rarely found in Egypt; no trace of it in Turkey or Persia. But 3 is a favorite with English and Germans, though the former equally esteem 2, and the latter 5. The instinct of the Latin people leads them to prefer 2 and 5, which are also the favorite numbers of China. India prefers 2. 7 is a number to which mysterious power is attributed, and it is widely used. In Russia and among Slavic people it is a special favorite. Among Spaniards and those influenced by Spain there is liking for an elevated numerical order, such as 19; in Salvador, 11; in Mexico, 17; and in the Philippines, 31. In Hawaii 13 is favorite. These preferences are no passing freaks, but ingrained deep in the nature of nations and races. Their choice, in every instance, affords a glimpse into the inner recesses of human nature."

CHART OF THREE-FOLD COSMIC CORRESPONDENCES

REALMS OF BEING, ...	PHYSICAL,	INTELLECTUAL,	EMOTIONAL.
TIME SEQUENCES, ...	BEGINNING,	MIDDLE,	END.
LIFE SEQUENCES, ...	YOUTH,	MATURITY,	OLD AGE.
NUMERIC SEQUENCES, . . .	1	2	3
MATHEMATICAL CONCEPTS,	UNITY,	DUALITY,	MULTIPLICITY.
METAPHYSICAL RELATIONS,	CENTRALITY,	BALANCE,	VARIETY.
PHYSICAL PRINCIPLES, . .	COHESION,	RHYTHM,	DIFFUSION.
ETHICAL ELEMENTS, . . .	LAW,	LOVE,	GRACE.
MORAL QUALITIES, ...	TRUTH,	GOODNESS,	BEAUTY.
SOCIAL CULTURES, ...	SCIENCE,	RELIGION,	ART.
PERSONAL VIRTUES, . . .	JUST JUDGMENT,	GOOD-WILL,	REFINED TASTE.
VOLITIONAL TREND, . . .	COMPETITION,	COÖPERATION,	COÖRGANIZATION.
FORCE TENSIONS, ...	RIGHT,	ROUND,	RADIATE.
FORM EQUILIBRIUMS, . . .	SQUARE,	CIRCLE,	STAR.
LIGHT-BY COLORS, ...	BLUE,	RED,	YELLOW.
SOUND-BY TONES, ...	TONIC,	MEDIANT,	DOMINANT.
CIVIC RELATIONS, ...	INDIVIDUAL,	SEXUAL,	SOCIAL.
FAMILY RELATIONS, . . .	FATHER-HOOD,	MOTHER-HOOD,	CHILD-HOOD.
GODHOOD, ...	CREATOR,	SAVIOR,	COMFORTER.
GODHEAD, ...	JEHOVAH,	CHRIST,	HOLY SPIRIT.
SACRED ATTRIBUTES, . . .	JUDGE,	REDEEMER,	INSPIRER.
SACRED REVELATIONS, . .	SINAI,	CALVARY,	PENTECOST.
SACRED DISPENSATIONS, . .	MOSAIC,	CHRISTIAN,	APOSTOLIC.
SACRED AMBASSADORS, . .	PROPHETS,	WISE-MEN,	SCRIBES.
ARCH-ANGELIC MESSENGERS,	MICHAEL,	RAPHAEL,	GABRIEL.
ANGELIC OFFICES, ...	MILITANT,	RELIGIOUS,	CIVIC.



J. W. Stimson, Pinx.

THE VISION OF THE HOLY GRAIL

(TENNYSON'S "SIR GALAHAD")

"A gentle sound, an awful light!
Three angels bear the Holy Grail:
With folded feet, in stoles of white,
On sleeping wings they sail.

Ah, blessed vision! blood of God!
My spirit beats her mortal bars,
As down dark tides the glory slides,
And star-like mingles with the stars."

CHAPTER VI.

PRIME-FORMS

"FOR what has made the sage or poet write
But the fair paradise of Nature's light?
In the calm grandeur of a *sober* line,
We see the waving of the mountain pine;
And when a tale is beautifully *staid*,
We feel the safety of a hawthorn glade:
When it is moving on *luxurious* wings,
The soul is lost in pleasant smotherings:
Fair dewy roses brush against our faces,
And flowering laurels spring from diamond vases;
O'erhead we see the jasmine and sweetbrier,
And blooming grapes laughing from green attire;
While at our feet, the voice of crystal bubbles
Charms us at once away from all our troubles:
So that we feel uplifted from the world,
Walking upon the white clouds wreath'd and curl'd."

—*John Keats.*

THREE PRIME TYPES of RELATION

MORAL	COMPETITION	CO-OPERATION	CO-ORGANIZATION
DYNAMIC	UNSTABLE {VOLUME & FORM} GASES. MOTION STRAIGHT TILL DEFLECTED EVERY ONE FOR SELF. INDIVIDUALISM BARBARISM	UNSTABLE FORM, STABLE VOLUME. LIQUIDS. MOTION RHYTHMIC SEMI-LOSS SEMI-GAIN. SEMI-CIVILIZATION	STABLE FORM & VOLUME. SOLIDS. (ALL GIVEN ALL GAINED.) MOTIONS COORDINATE. CIVILIZATION
GEOMETRIC	EQUILIBRIUM & REPOSE } in TENSION. RIGIDITY & SUBORDINATION	FLEXIBILITY & MOBILITY. EQUILIBRIUM & REPOSE } in Cooperation & Subordination	HARMONY & ORGANIZATION. UNITY with EQUILIBRIUM & VARIETY. EQUILIBRIUM & REPOSE } in COORDINATION.
MECHANIC	ON POINT. on LINE. CRYSTALLINE. CYLINDER. CONE. SECONDARIES. TERTIARIES. & COMPOUNDS. CONIC SECTIONS. ELLIPSE. PARABOLA. HYPERBOLA. HEXAGON	RHYTHM. ELLIPSES. SPIRAL. VOLUTES. VARIABLE REGULARLY.	RADIATION - DISPERSION. COMPOUND RADIATION. CLOSED & OPEN TANGENTS - BALANCED

most Dominant in MINERALOGY - MACHINERY - ASTRONOMY - in SEED - FRUIT - VEGETABLES - FISH - REPTILES - INSECTS - BIRDS - BEASTS - FLOWER - HUMANITY

ARTISTIC Influences

in LINES. MOVEMENTS. FORMS. TEXTURES. Suggested Sentiment)

By TENDENCIES RIGHT - ROUND - RADIATE }

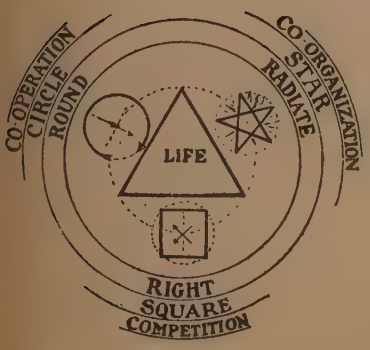
in COLORS.

BLUE - Purple - OLIVE - COLOR
Stern - Cool - Controlled
COLORS RED
WARM & IMPASSIONED FRUIT & HEART
COLORS YELLOW & WHITE - CHEERFUL - BRILLIANT.

JOSS.

BATTLE WITH AMAZONS — ANTIQUE GREEK FRIEZE

PRIME-FORMS



WE HAVE seen that the whole secret of interest in rhythmic motion (which we call music) or space relations of apparently arrested motion (which we call form) is really the Internal Beauty and Significance of the measures, functions and ideals. It therefore becomes of supreme importance to recognize and remember the Three Great Keys or Prime Ratios in Form, from which all minor and modified combinations arise—just as millions of modulated notes of sound, or hues of color, may be drawn forth and blended infinitely from three musical tones, or from three prime rays of light. To find these Prime Significances of form, we go direct to the Essence-of-all-form, where all form takes its root and rise—in the *significance* of the Three grand Geometrical "Primes." And we should clearly note how and from what qualities of Force and Arrangement these few Primes arise, in order to carry with us always their inherent flavor and influence in growing deductions or combinations.

It is found that all nature palpitates to these mystic forces and moves out upon these strenuous compulsions of Spiritual Law. Like electricity or the tornado they are not less potent for being invisible to the outward eye, so long as inward conditions and receptivities are active. The war horse leaps to the kindling strains of music—whether he will or no; the spring brightens a lovelier iris on the burnished dove, to which his watching mate is drawn and fascinated as by fate. The whole world is outpouring forms, colors, rays and sounds to express its *Soul!* The ages of civilization strew the pathway of civilization with their ceaseless struggle to manifest esthetic impressions; to incorporate esthetic ideals; to discover Esthetic Law. Science herself, to-day, trembles at Beauty's gates and is halting a suppliant at her portals. But the words "seek and ye shall find, knock and it shall be opened," are as true in this direction as in the rest. The very discoveries in one field are opening a pathway to the next. But as birds sail the invisible air and ships the tossing seas, by applying the physical law of gravity, without comprehending the intellectual

principles of Balance, etc., so men have drifted with esthetic instinct instead of comprehending esthetic science. The ages have ripened to higher investigation and discovery, and by fragmentary glimpses of light they draw nearer and nearer to the great culmination!

As Dr. Hill put the case suggestively, some years ago (which this book shall try to carry much further, to-day): "One painter ascribes the beauty of outline to the spiral, or helix, while Darwin refers it to infant association with the [circular] form of the mother's breast, but I venture opinion that it is unconscious perception of geometric law. Nor is it essential to the highest enjoyment of beauty that the conformity to geometric ideals be perfect, any more than it is essential to the highest music to have the harmony perfect. On the contrary, the higher degrees of beauty are apt to be found in forms that suggest, rather than embody, the ideal; and especially in figures potentially (not actually) symmetrical. The monotony which might result from the unbroken regularity of form is avoided, and a new grace is given, for example, to the higher animals by their temporary disguise of symmetry in their varied positions and movements. In the sea-shell the same end is attained by the spiral form which so many of them take; in which there is not an actual symmetry but only a law of symmetry, the perfect development of which would require an infinite number of convolutions. In the forms of vegetable life there is the widest departure from actual symmetry, and yet a constant suggestion of its laws. The approximations are beautiful to us, and the pleasure given to us was foreseen when the law was adopted. May it not also have been felt? And may not the forms of flowers be approximations toward the expression of Infinite Beauty? The external symmetry of animals probably has beauty as its final cause, from the lack of symmetry in the viscera which are hidden from sight. This at least is manifest, that the sense of beauty and presence of beauty are kindly adapted to each other in the world. Even shapeless matter declares its Creator's power; the perfect symmetry of crystalline forms, the potential symmetry of all organic worlds, shows forth his wisdom and his love."

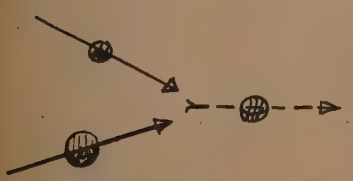
NOW WE remember that the creations of geometry are abstract spirit, pure and simple, first evolved by Reason and thrown up, intellectually, into the special conceptions of spirit, by the faculty of the Imagination; and all these rational relations first hold good in spirit and logic, then they create the foundations of all Form-Reasoning and Form-Conception in matter. The soul has this mystic power of *idealizing* form, and reasoning out its generation (into space concepts) before ever exerting will or employing matter to put forth these dreams into phenomena (that is, into material conditions for other individual souls to observe, appreciate and enjoy). The architect conceives his house before he touches pencil or board, and the sculptor sees his vision in the marble before he strikes a blow with the chisel.

Once that Deity wills his dreams to be realized to other beings, then we note this great physical principle which he employs in the mechanics of motion, that when an atomic impulse is given in space, not only is "a straight line the shortest distance between two points" (and hence is the most direct line of obedience), but every molecule is compelled to go upon that straight course until deflected by some other force. It is at first (so to speak) *ego*-istic, in the sense that it must directly assert its own *initial* energy and right-of-way, so far as entitled to a straight course of obedience on its mission. Hence a straight line is caught up, by man, in expressive language, as what he calls a line-of-rectitude. It is the clear record of *a straight thought and steady will.* There is character and significance instantly embodied and conveyed by it, as though it were an alphabetic letter in form-language.

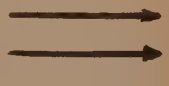
Now as point is (geometrically) considered as expanding into line, and line into planes, and planes into solids, so the element of rectitude and rigidity artistically *passes over* and affects every line, plane and form, in which such "straightness" occurs, with some similar sentiment peculiarly vigorous and "masculine"—no matter what the art application or material; and we shall soon see how forcibly it counts in all art

composition. One writer, noticing too hastily and narrowly this first and primitive law of "Competition" exclaims with an accent of popular anxiety: "Every atom of universe is endowed with an unconscious will and life of its own. Atoms seek atoms according to inherent laws and fly from or annihilate each other! The whole process of life appears to be never-ending struggle; what can not conquer is conquered; history is one long catalogue of appearing and disappearing nations, of devouring and devoured kingdoms! This conflict in the outer world is seconded by conflict in the inner. Fear, hope, love, passions of all kinds, imagination and reality, pride and humility, prejudice and wisdom, form an intellectual hurricane not less destructive! But Science, Religion and Art—this Divine Triad—enter; Science creates consciousness of the laws according to which we are governed; the link between cause and effect is traced; Religion excites in us the hope of higher and better morals; lastly Art throws its beautiful halo over everything."

Now suppose, secondly, that like differently sized and impelled billiard balls, another and differently directed energy approaches our first particle upon the highways of space; then a second law begins to operate, that, "when a greater than he cometh" the greater force overcomes, deflects, or attracts away the weaker, by just so much as its own impulse or force is the *greater*. The surplus power belongs to the stronger; and in this sense of fundamental rights, to him that hath (intrinsically and in abundance) is added more abundantly; or, to quote Emerson, "when half-gods go, whole gods arrive." This seems not only a mathematical and dynamic principle but a moral and social one also—*when built upon foundations of absolute Rectitude, Justice and Truth.* But a lie, or an injustice, never is really "stronger" than a truth or than a justice is (however it temporarily appears to be stronger, or however hard pressed that little truth may be). And, in every case, the atom's glory, individuality and "manhood" is in its competitive power to realize its inherent truth and mission—so far as it is commissioned.



Again, if two particles speed onward through space on steady courses so related that they ever hold a similar (though not identical) aim, at constantly equal distances (as though individually free, yet respecting and accompanying each other) we call these lines of motion "parallel," and notice that they exemplify a delightfully frequent principle of ornamental beauty about us. It seems symbolic of a principle of upright friendship, as of soldiers marching to a common flag, or comrades journeying toward a kindred ambition.



But now let us double this rigid and rectitudinal parallelism, about a common center, so that the parallel sides are all equally distant and exactly balanced about that center, and the angles of contact and conflict are exact right angles also; then we have a wonderful form generated in space which is called a "*Square*," and which becomes the first great *Prime form*—full of masculine character in all art composition.

We are struck by the constancy with which art and language together go to this grand symbol for forceful expression. Its elements appear forever in architectural and decorative design, and are the basis of crystal beauty. Its cubes are the very heart and life of the diamond—that quintessential triumph of Nature's firmness and luminosity. St. John saw the heavenly city "four-square" in foundation, as though to set forever the divine seal upon this sublime form. And no wonder that in ten thousand ways man daily introduces it into his work, personality and language, and honors its significance by honoring the "fair and square" man, who "does business on the square," "squares-up" his debts, and (when truth or right is at stake) "squares off" and stands as invincible and heroic as the famous "square-at-Waterloo." It is evident that, from the origin of things, when drifting points or atoms first moved to the impress of creative will, that this formal record of "straightness," "rightness," and rectitudinal energy or "backbone" was intended to convey to all time

the symbol and implication of Manly Individuality, constancy and swift obedience to Eternal Law. And the rigid uprightness of the square becomes forever beautiful *so long as the tension of its competitive energies are upon perfectly right lines*, and *in perfect equality* of right-angled Equilibrium or "fair play" about that mysterious Center-of-Unity (which can mean no other than God himself). It is an ethical and economic principle as clearly as it is esthetic, and full of significance to modern society. Is not every soul, somehow, compelled, sooner or later, in this life or the next, to be "crucified" upon that sacred Cross of Truth and Law that is the very core of the square, and constitutes its spiritual *center?*

Says Ruskin: "Taking up one's cross means simply—go the road you see the straight one, carrying what you find given to carry, as well and stoutly as you can, without making faces or calling people to look. Some think it better large, many that they could go faster if it were small, and those who like it largest are usually particular to have it ornamental and of best ebony. All you have to do is, *keep your back straight* as you can and not think about it, nor boast. The essential meaning of virtue is that Straightness of back. It means courage of the nerve,—Vital Courage!"

Do we not daily take up our cross, and put to test our own individual honesty, personality and obedience to truth, to justice and to rectitude (the diamond energies of our soul), in the spirit of Solomon's counsel, "iron sharpeneth iron; so a man sharpeneth the countenance of his friend," "faithful are the wounds of a friend"; or, as St. Paul implies in the Christian soldier girding up his loins, with "the whole armor of God, that he may be able to stand"; or, striving for the mastery, may "so run that ye may obtain"? The grand secret here revealed by Nature, in this first syllable of her language, is that the fundamental law of *Competition* (beginning the relations of art or civilization) can not be removed from life, because by it alone we know or can be known, on the side of personal obedience to truth and right; as only by reference to the right line and right angle can the oblique be known. But this competition must be contested upon *absolutely equal, fair and square, right-on-all-sides conditions, about a common center of reverence and judgment that must be God himself*—center of centers, Judge of judges, the very core and pivot of truth and law in operation.

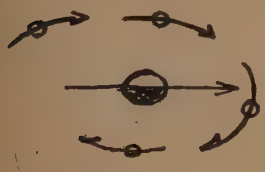
"A God of truth, . . . just and right is he." (Deut. 32:4.)
"The ways of the Lord are right." (Hosea 14:9.)
"The statutes of the Lord are right." (Psalms 19:8).
"He will not lay upon man more than right." (Job 34:23.)

The esthetic beauty, then, of the Right line, Right angle, and Rectangular Square is essentially akin to and parallel with the ethical, *i. e.*, the spiritual and intellectual character conveyed and recorded by their atoms, significant of the will behind, and of the principle by which that will is acting. Also, so far as the *One* at the center of existence is acting through every atom's individuality and through every atom of individuality in man himself, the ego must develop himself to the fullest possible measure of his personal mission, making his calling and election sure—but *upon absolute lines of inherent rectitude within himself*, and "parallel" with all other true lines of kindred aim and commission,—never substituting his own self, however, for the great spiritual center, to which he, as well as others, must be true, (for by that central Truth alone can he or others be rightly located and judged).

If I loose a pebble from my hand, it falls to the floor, but if the floor were removed it would fall to earth; if earth were removed it would fall to the sun. If the sun were away it would speed to the central sun of suns—the Heart of God! So the brooks may seek the rivers but the rivers seek the sea. He laughs best who laughs last. The *essentially* strongest survives. But what is the "strongest"? It is ever the higher and yet higher Truth; the Law that is the *most* just; the good that is ever the *better*, and the better that

is ever the *Best* (for any special point of time or plane of existence).

So now let us note what happens in space, when two atoms, or groups of atoms, speed together, but by unequal mass, momentum and affinities. The larger atomic force will dominate its lesser neighbor by just so much as it is its intrinsic superior, and will draw the lesser after and about its stronger self. The tendency will first be to accelerate the weaker force till it flies past the stronger, then to retard and pull back the weaker till it returns to the stronger, and so sets up an orbit of Subordination, establishing by this contrast and competition a new principle of association by mutual Concession and Coöperation; a certain Freedom-in-Control. And if this relation be so exactly just and equally balanced on all sides, in perfect equilibrium about that center we explained before, we have a new and glorious form called a *Circle*.



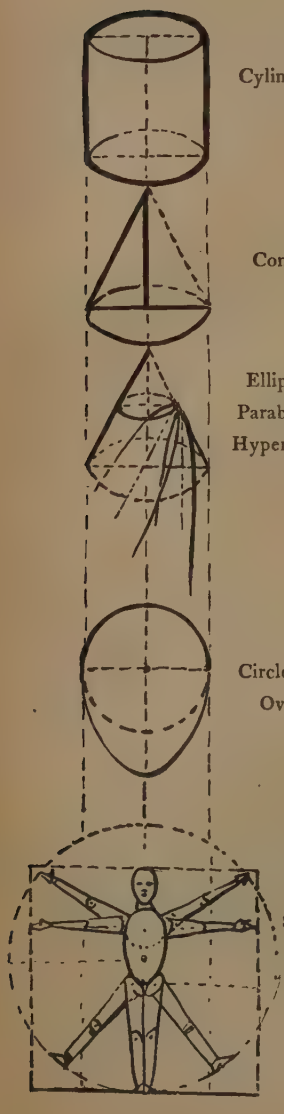
It is as though the outer sides of the square, that represented the tendency to straight advance and of resistance toward an outer world, were just balanced by the other tendency of central rectitude in the axes of the square toward the heart of things. And this produces a resultant compromise or combination line which is a Perfect Circle,—the second grand and symbolic Prime-form—of marvelous range and suggestive beauty. If we analyze its charm and special character, we find its inner relations contain the same "all-sided equality and balance" about the same Central Unity we found in the square; but also something higher, "without beginning or end," the fascination of which is of another order of thought, involving advancing powers and principles above the rigid competition and tension of the square. The angles of the square, esthetically force on the view the quality of rigor and contention; while the smooth and round perimeter of the circle is more kindly and "feminine" in its effect, seeming to hide or to adjust the inner compromise (between centripetal and centrifugal force) by a Duality-in-Unity, typical of sex and marriage. The outer and subordinate satellite force seems to abide by and to follow the dominant central force as the moon does the earth, or a wife does her husband, yet in such perfect fairness of equilibrium that the tendency to divide is just controlled (and no more) by the tendency to centralize.

"Every superior mind," according to Mr. Emerson, "will pass through this domain of Equilibration—I should rather say, will know how to avail himself of the checks and balances in Nature, as a natural weapon against exaggeration." It is a beautiful social and economic law, as true as it is esthetic or physical; because it establishes the great principles of freedom-in-control, taxation-with-representation, upon perfect lines of coöperation and with perfect balance of justice—as between two elements organically associated in one orbit. It is essentially the Mother-Form rather than the Father-Form in Nature, and is symbolically "caught up unto God and to his throne" at the center of revolving suns, even as St. John saw it in the woman with "the moon [or circle] under her feet" caught up in his vision of the final revelation at the last great day. The universe seems to seize it as the type of *Love* (distinguished from *Law*); of productive "Womanhood" rather than governmental "Manhood"; and to embody it in myriad spheres whirling in harmonic circles, or to fix its splendor like a gem in the dual eyes of man, and like a crown of glory upon the dual breasts of woman. It is as though Deity would emphasize forever the principle of Equilibrium-in-Coöperative-Love which is the essence of true wedlock; and imply a later but higher state of civilization than the masculine rigidities and competitions of the square. It is a loftier moral and industrial, as well as esthetic, progression in form-reasoning and form-generation. Not as though the circle supplanted the square, but evolved somehow *out*

of the square's perfectioning. It is the divine *growth* of Nature out of squareness into circularity.

So the spear evolves into the bow, yet retains its own rectitudinal character and usefulness in the arrow, (the straighter the arrow the better for the bow). So marriage comes when manhood is self-established. So Adam is perfected before Eve is born from his (circular) side. So love is the fulfilling of the law. In this connection Longfellow's analogous lines seem appropriate:

> "'As unto the bow the cord is,
> So unto the man is woman,
> Though she bends him, she obeys him,
> Though she draws him, yet she follows,
> Useless each without the other!'"



In the transition between Square and Circle (cube and sphere), are born the cylindric, conic and ovate forms (with sectional derivatives in ellipses, parabolas and hyperbolas), *wherein are discovered the keys to musical vibration, the orbits of celestial motion, and the structures of vegetable and animal form.* The famous genius Da Vinci, as we before mentioned, discovered by careful and ample comparisons of the measures of perfect models, that the finest human proportions of form are found in the circle overlapping the square in such manner that their centers are superposed, or rather balanced, upon the same median line, so that the center of the square is at the center of male generation, but the center of the circle is at the navel (where childhood is detached from maternity in order to radiate forth into individual freedom and individual life). The square is the basis of man's strength in reposeful rectitude and initial energy. The circle is the basis of his second (female) phase of transmitted energy in plastic action. The Square is energy crystalline and static; the Circle is energy mobile and dynamic. (See page 230.)

Supt. Walter Crane, of the Kensington Museum, England, writes of these two great Primes in form: "Square and Circle seem to be a sort of *Cœlus et Terra* (Heaven and Earth) dividing the whole race of pattern between them. Square or angular patterns strike us, at once, by their emphasis and rigid logic; circular and curvilineal patterns by their rhythm and grace"—just as masculine energies and tastes are apt to express themselves by the first characteristic of angularity; but woman's forms, lines and movements by the second characteristic, of grace. Plato and Swedenborg both explain this strange universality of Sex,—they say it is spiritual and eternal, not local and temporary. So writes the poet Whitman:

> "Out of the dimness opposite equals advance;
> Always substance and increase,—always Sex.
> Always a knit of identity, always distinction,
> Always a breed of *life*."

Finally, what is that third and last great Primary Relation, embodied in the *Star*-form, so peculiarly distinct and supreme in its resplendent beauty and fascination?

It contains both the energy of Right relations and the flexible grace of the Round, with something peculiar to itself in the higher Radiate character. You will find its attributes most exquisitely presented in God's flower-world, where he seems to superabound in exuberance and delicacy of poetic and artistic sentiment; and especially in those multiplex radiate blossoms such as daisy, chrysanthemum, wild-carrot, blazing star, passion flower, foam flower, honeysuckle, columbine, laurel, etc.

In this relation we clearly see a new and vaster symbol, more beautiful than all, for it is the most rich, generous and diffusive of all relations and forms, typical of the All-attaining, All-perfecting, All-inspiring power of Deity!

In the first (square) relation, individualism was dominant, and is the first strong concept mankind attains. The "Ego," the "*one*," is embodied in each individual's identity and self-interest —with all the inevitable rigidity of tension, by the strain of competition.

In the second (the circle) there was Duality and Sex, with a kindlier, easier freedom-in-control, from which, indeed, by rhythmic pulsation and undulation, all wave force seems born into sound, electricity, heat, light, ether, or life.

But the third great prime form is the highest example of Multiplicity, Variety, Dissemination and Infinity, within the *most* beautiful conditions of equilibrium and expansion—through the Spiral, Vortex, Volute and Tangent intermediaries. It grows out *from* square and circle as its parents, but rests, as it were, still *upon* them, bringing them up to a finer and fuller maturity, tier on tier, hierarchy on hierarchy, wheel within wheel,—order, freedom and expansion for each made possible by the absolute Unity, Equity and Variety-in-Balance-and Unity which is the ideal of heavenly completeness, before the casting-of-the-seed for perpetuation and self-renewal.

These are the Three infinitely sublime, symbolic and germinal Relations in Form Reasoning (unfolding from ratios in force-expansion), in which, as artists, we *discover all later forms are derived*,—as from three prime colors we find all secondary and composite hues. Their several proportions and adaptations to time, place and purpose are the immense mysteries of ascending Formative Life and Character—biological and social. But in the *Star* we see typified that perfect society, that true "socialism" at maturity, wherein *every individual center rightly develops* its perfections in time, space, movement, form and composition with *entire justice to each individual* in the whole, or to *the whole in each individual.*

Thus it becomes the only type that can perfectly embody Celestial and Immortal Beauty, because in its perfected proportion, harmony and consistency is found the *ideal* "pattern shewed in the mount,"—the triune and immortal Elements of

1—(*Strong*) *Creator*,
2—(*Gracious*) *Intermediator*,
3—(*Infinite*) *Inspirer*;
which holds all Cosmos together;
all Nature in Harmony; and
all Life and Society in Peace.

This progressive advance and unfoldment of Force through Form is its own rise and ennoblement from

Unity to Universality;
Impulse to Expression;
Chaos to Cosmos; and from
Divine-Silence to Divine-Symphony.

"The difference between chaos and cosmos," says one writer, "is that, in the first, the infinite motions are incidental and transitory, while in the second they are functionally correlated and permanent."

Ruskin writes: "You may always stand by form as against force. To a painter the *essential character* of anything is the form of it, and the philosophers cannot touch that! It is very fine knocking the light into the sun by a cataract of planets, but hail away, you will not knock out what we can. Here is a bit of silver on which, with a single stroke, one of us (two thousand years ago) hit out the head of the Apollo-of-Clazomenæ. It is 'merely a matter of form,' but if any of you philosophers, with your whole planetary system to hammer with, can hit out

such another bit of silver as this, we will take off our hats to you. For the present, we keep them on. Hold fast to form as distinguished from the mere transition of forces—the moulding hand of the Potter commanding the clay, from his merely beating foot as it turns the wheel. The philosophers never consider how far the existence of light depends on the putting of certain vitreous and nervous substances into the formal arrangement we call an Eye.

"You may earnestly believe that the presence of the Spirit which culminates in your own life shows Itself in dawning wherever the dust of the earth begins to assume any orderly and lovely state. You will find it impossible to separate this idea of graduated manifestation from that of the vital *power*. Things are not either wholly alive or wholly dead. They are less or more *alive*.

"The great laws which never fail and to which all change is subordinate appear such as to accomplish a gradual advance to lovelier order and more calmly yet deeply animated Rest. Nor has this conviction ever fastened itself upon me more distinctly than during my endeavor to trace the laws which govern the lowly framework of the dust. For, through all the phases of its transition and dissolution, there seems to be a continual effort to raise itself into a higher state; and a measured gain (through the fierce revulsion, and slow renewal of the earth's frame) in Beauty, and Order and Permanence. The soft white sediments of the sea draw themselves, in process of time. into smooth knots of sphered symmetry; strained under pressure, they pass into nascent marble; scorched by heat they brighten and blanch into the snowy rock of Paros and Carrara. The dark drift of the inland river or stagnant slime of inland pool and lake divides, or resolves as it dries, into layers, slowly purifying each by the patient withdrawal of it from the anarchy of the mass in which it was mingled. Contracted by increasing drought till it must shatter into fragments, it infuses continually a finer ichor into the opening veins, and finds in its weakness the first rudiments of a perfect strength. Rent at last, rock from rock, nay atom from atom, and tormented in lambent fire, it knits the fibers of a perennial endurance; and, during countless centuries rising to *repose*, finishes the infallible luster of its crystalline beauty under harmonies of law which are wholly beneficent."

O NOW in a vast wave we shall behold the unfolding Hand of Heaven unroll its matchless wonders of form creation, from the humblest and most mysterious embryo up to the culminating triumph of persistent progress, in the upright and resplendent form of man! A marvelous and steady Transformation and Transmutation of expressive forms becomes revealed, fitting and adapting themselves to growing functions, yet ever based upon the germinal elements we have discovered, and dependent for artistic character upon their adjustments into esthetic language, from the esthetic alphabets and syllables employed.

Within all we notice clearly the abstract Ideal and conception latent—the germ of each special Divine Dream or poem. Then crystalline textures upholding and fixing the metrical and geometric and quantitative conditions of its lasting Structure; then plastic and rhythmic Nutrition, Locomotion and Sensation, finding place and time for their development in order and sequence; then all the resplendent display of significant textures and attractive colors, with deliberate and obvious study of *decorative and artistic effects* throughout! And lastly and always, appropriately with every form, color, or function, the characteristic and organic attributes of mind and individuality which display the special intent and *meaning* of each life!

Along the entire way up we notice the perfect and steady advance of Life in quality and nobility of Form, Function and Spiritual Implication—rising as a whole (and in the several stages) from Unity and simplicity to Variety and Complexity; and from the harder and severer forms and textures seen in crystals, trees and limy sea-shells, up to lighter, more plastic, more refined and aspiring creations; attaining at length the humanly useful domestic and docile intelligence of to-day. From

blind or sluggish existence, each latent function, form and sense *rises* purified, practiced and perfected, for its splendid contribution to the final triumph of man,—the *inner and unrevealed ever working itself outward to refulgent self-revelation*, by friendly steps and by fellow-laborers, up the Ladder-of-Life, up the mighty Stairway of the Temple of Art! The harder forms and severer tissues, which first preponderated and emphasized themselves for resistance or self-protection, give way gradually and melt into concealment or reserve before the lighter, kindlier, more plastic and radiant revelations of tissue, color and form.

At last *Man* himself bursts forth upon the ascending Tree-of-Life, a new but nobler manifestation of divine Ideal; dependent and developed by consistent inheritances along the magnificent progress that had gone before, and finding in self-consciousness and advancing Reason his power to utilize and ameliorate his conditions and civilizations.

THE WIND FLOWER SYMBOLIZED

By Martha Norton

Botticelli, Pinx.

TOBIAS AND THE THREE ARCHANGELS

CHAPTER VII.

FORM SERIES

FROM

NATURE'S STUDIO

THIS astronomical chart, containing many forms taken directly through the telescope, shows those prime tendencies of Force into Direction, Motion and germinal Form (by rectilineal parallel, circular, spiral, tangential and radiate relations). which construct celestial worlds and orbits, and terrestrial beauties upon our own planet.

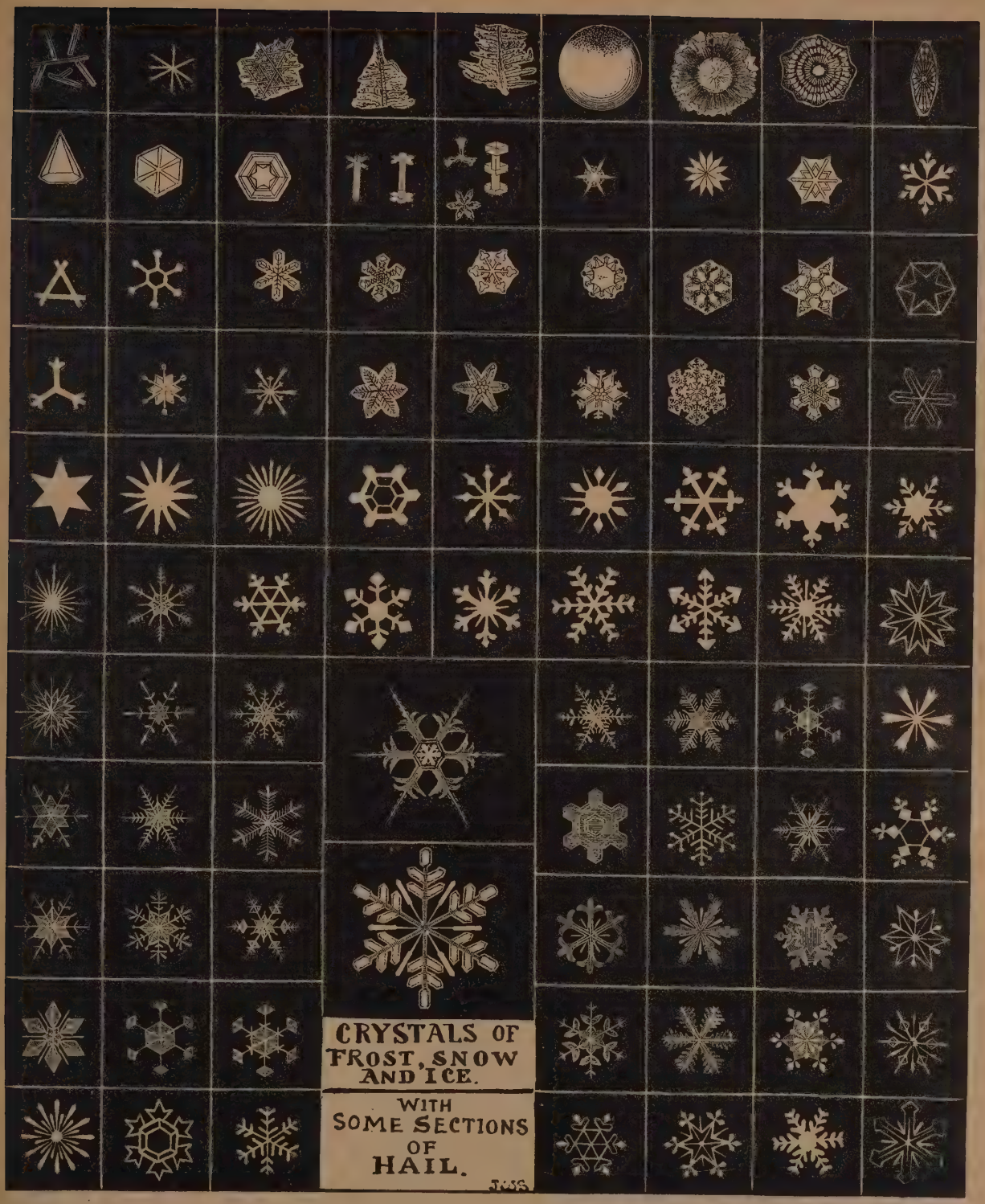
SOME ASTRONOMICAL FORMS

WE GIVE a view of some beautiful snow-flake forms that Nature is penciling upon the winter mists, and that fall to earth and rise again in the sunlight as though to show man the pathway of life, the secret of eternal art and beauty.

About them Henry Crocker beautifully writes: "Aloft, above this noisy world, are realms of unbroken silence. No call, no cry, no jarring sound reaches that realm remote. No lark carries its song so high. The eagle sunward soaring never circles to such dizzy height. No insect's gauzy wings flutter in that thin air. The tenuous tides are restless there, swirling, drawing, driving, often in gales swifter than below. It seems a spirit realm!

"One would hardly think of looking there for any messenger or message. Is there anything that can ascend so high and returning bring a revelation? Yes, vapor motes, more spirit-like than air, drawn by sunbeams, wafted by wind, can reach the silent halls! There they are continually going, invisible as spirits in their ascent; bright and beautiful as angels on their return. Crystallized into stellar tablets, inscribed with the law and loveliness of the Creator and vying with the stars of the firmament, they occupy the silent spaces. No sooner embodied in being than they feel an earthward drawing—a longing to reveal to men something of Him who stamped his glory on them.

"The sunbeams release them leisurely, they make their journey as if communing with their Maker all the way, they are developed more and more into the likeness of his beauty. A varied experience has each, keeping company with its kind, yet having a life peculiarly its own, the record of which is faithfully preserved in its features. Mysterious electrical forces play upon those shining hosts, brooding over them, like the Spirit at creation. Flying, as if alive, they cover our sin-cursed world with celestial purity and light. They flit into our eyes and look up to us as if imploring us to look at them *carefully* and to see what *beauty and glory* has been wrought upon them! But many are indifferent to their appeal! They brush them off and trample them under foot, and never dream what elegance they destroy, what purity they defile, what delight they miss. But the time is coming when many shall *see!* They are beginning already to see!"



"Hast thou entered into the treasures of the snow?
Or hast thou seen the treasures of the hail . . . ?"—*Job*

TO THIS exquisite descriptive version may be added the analytic vision of the scientist, G. H. Johnson, who says of the micro-photographs made by W. A. Bentley, examples of which we give on the next page:

"It is supposed that cohesion and adhesion, as well as gravity, are essentially the same as electricity, and together with heat, light and the X-rays are forms of motion of the elementary particles of matter and ether.

"If a crystal be removed from a solution or atmosphere in which it is forming and be carefully preserved, it never loses the power of resuming its growth. It also possesses the power of self-repair. If it be bruised or deformed, the subsequent growth is abnormally rapid over the injured area until perfection of Form is regained.

"Two forms are the elements out of which all others are made—fasces of slender, needle-like particles, and thin hexagonal plates.

"The interiors show fascinating arrangements of loops, curves and dots, making a kind of landscape in marked contrast to the perfect geometric outlines in which they are framed. There is much greater variety in the interior than in the exterior forms. The double lines show pipes or canals filled with air or water.

"The particles, even while they hang together, are in constant vibration among themselves. A very crude idea of such motion may be formed by watching a group of players who join hands and then push and pull their comrades. Heat always increases this vibration, and when it reaches a certain degree—called melting point—the action is so violent that the bonds holding the particles break; the crystals then lose their form and dissolve into a drop of water. The six radii first dissolve into spear-heads; then the angles are rounded and the interior markings are obscured. The transformation from complex to simple, from solid to liquid, is fully revealed under the microscope.

"The frost-work on the outside of window-panes, which rivals leaves and flowers in elegance of design, shows how the ice-crystals depart from geometric arrangement when their freedom of growth is limited. They bend to circumstances, and the more they are constrained the more beautiful appears their grace and adaptability.

"Sometimes the snow-flakes look like flowers, as if Nature in depriving us of those which spring from earth would send us others which come down from the sky. When we lose the earthly we gain the heavenly. But the earthly loss is only temporary. The white mantle which looks like a shroud covering a dead vegetation, is really a beautiful flowery cloak protecting delicate plants from too severe cold, and so preserving the life which it conceals."

Micro-photographs by Mr. W. A. Bentley.

ALS ENLARGED

THESE are some of the early and minute forms of earth's own children beginning to take permanent abiding residence with her, and within her waters of life.

They are created with the same "right, round and radiate" combinations of geometric form that underlie all Nature, and begin the wonderful progression by which the little life-cell secures for itself and developes, first a nutritive, then a locomotive, and then a sensitive plane of existence. Rising thus higher and higher from a life of mere absorption, to a life of locomotion and experience, up to a life of sensation and comprehension by brain.

We are here struck already by the artistic and ornamental principles of design and embellishment which will be more elaborately explained further on, in the proper place, where we speak of composing forms and of Repetition, Reflection, Parallelism, Overlapping, etc., as principles of ornamentation.

MINUTE LIFE-FORMS (OF DIATOMS)

"ORGANISM itself is a flash of the Universal Consciousness."—*Edward Carpenter.*

SOME GERM-FORMS (VEGETABLE)

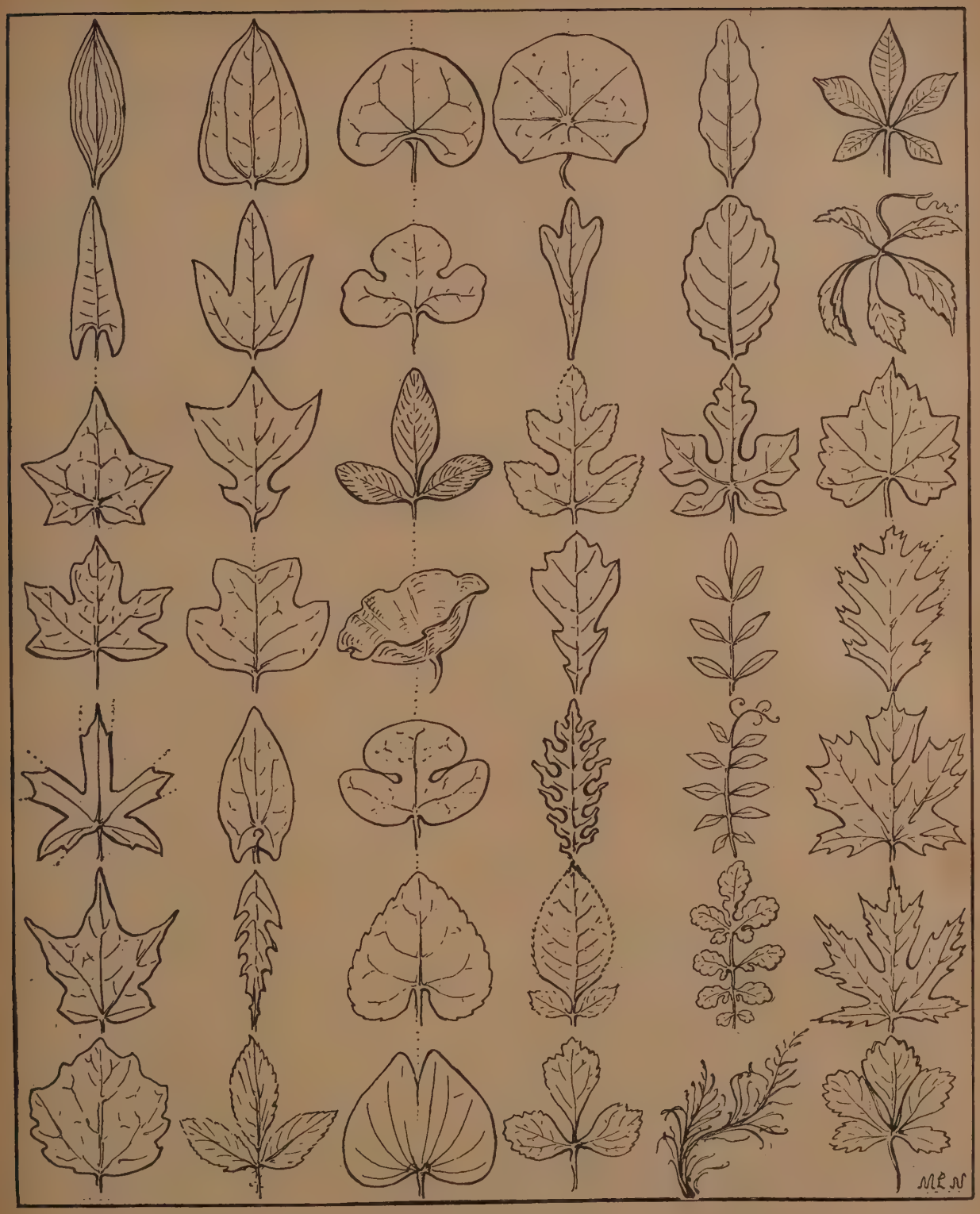
"HAVE FAITH! For all things are possible. Yet at any one time and place only one thing is possible. And all things are good, yet at any one time and place can you extract the good only from that which is *before* you."—*Edward Carpenter.*

SOME VEGETABLE AND FRUIT-FORMS

"ON ALL SIDES God surrounds you—staring out upon you from the mountains and from the faces of rocks, and of men and of animals! Will you rush past forever insensate and blindfold?"—*Edward Carpenter.*

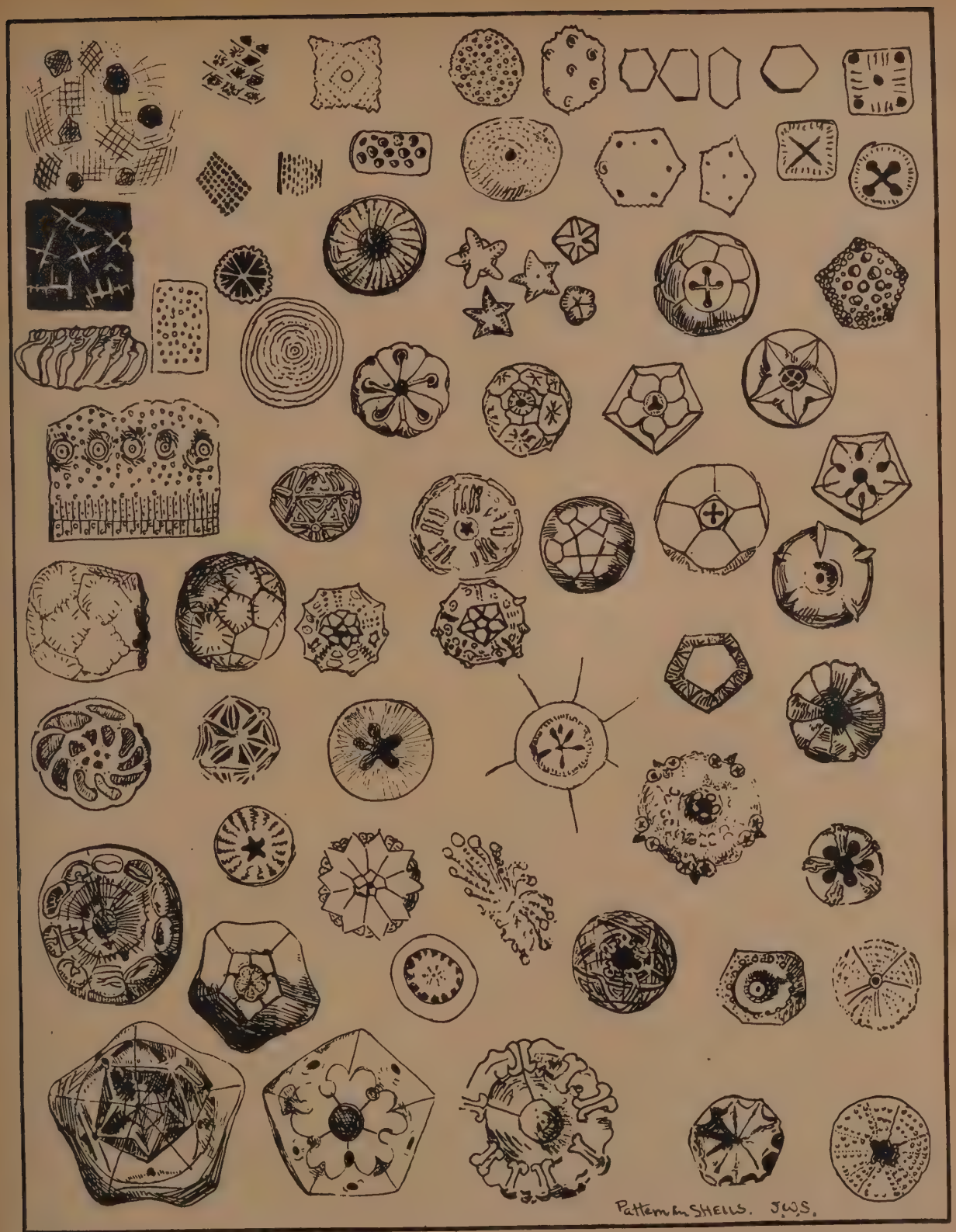
SOME STEM-SECTIONS AND LEAF-FORMS

"DO NOT HURRY! As at the first days the clouds suffused with light creep over the edges of the hills, the young poplar poises itself like an upward arrow out of the ground—the birds warble with upturned bills to the sun."—*Edward Carpenter.*



HIGHER LEAF-FORMS (MORE COMPLEX AND BEAUTIFUL)

"THE SUN RISES on hundreds of millions of human beings; the hemisphere of Light follows the hemisphere of Darkness, and a great wave of Life rushes round the globe!"—*Edward Carpenter.*



MOLLUSCAN SHELL-FORMS

"ALL THIS has gone on for *millions* of years! Begin to understand why the animals are not hurried!"—*Edward Carpenter.*

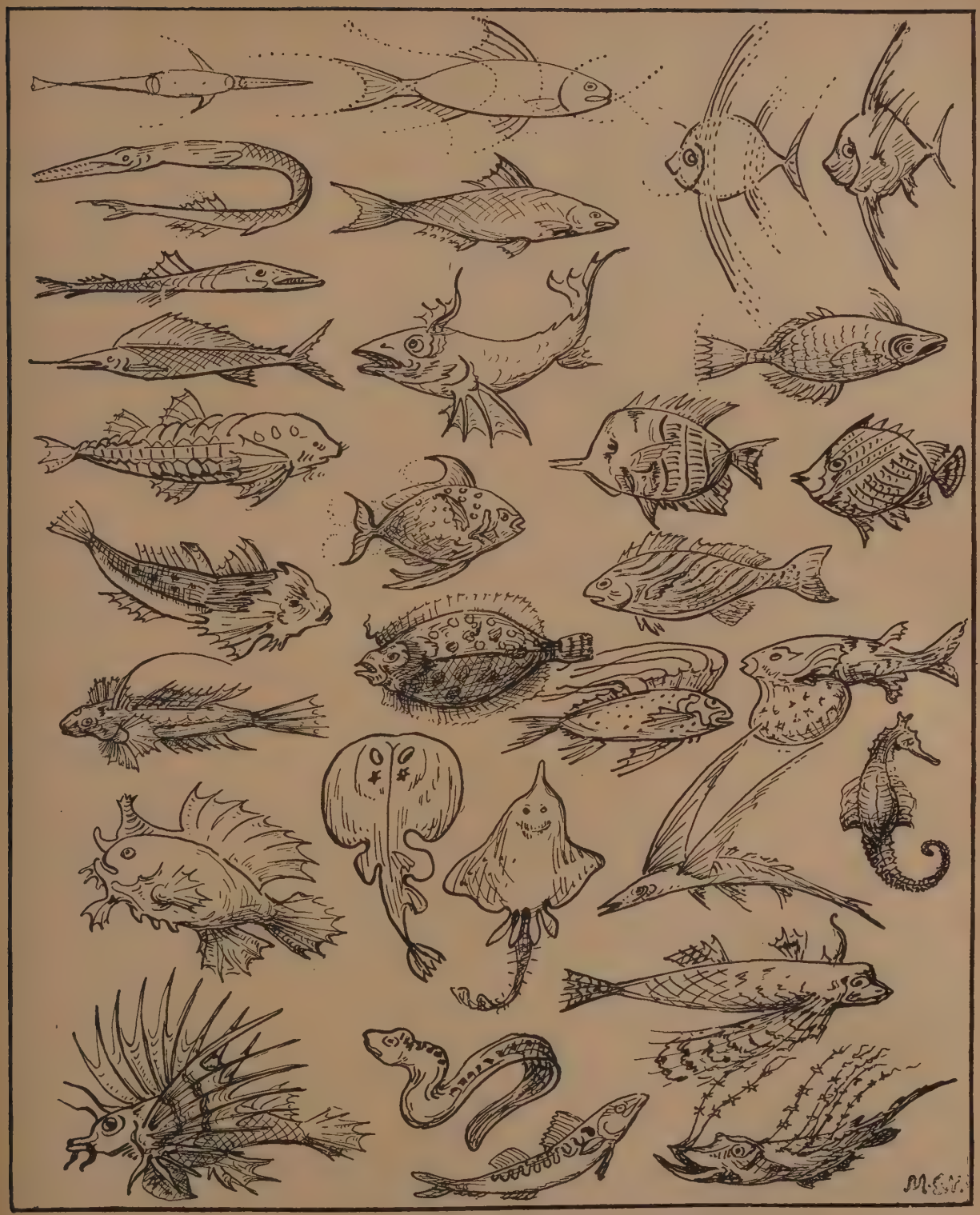
RHYTHMIC AND EVOLVING SHELL-FORMS

"WAIT, WAIT ever for the Coming of the Lord! See that you are *ready for His arrival!*"—*Edward Carpenter.*

DECORATIVE PATTERNS IN SHELL-FORMS

(Concentric and radiate)

"BEHOLD the animals—there is not one but the human soul lurks within it, fulfilling its destiny as surely as within you."—*Edward Carpenter.*

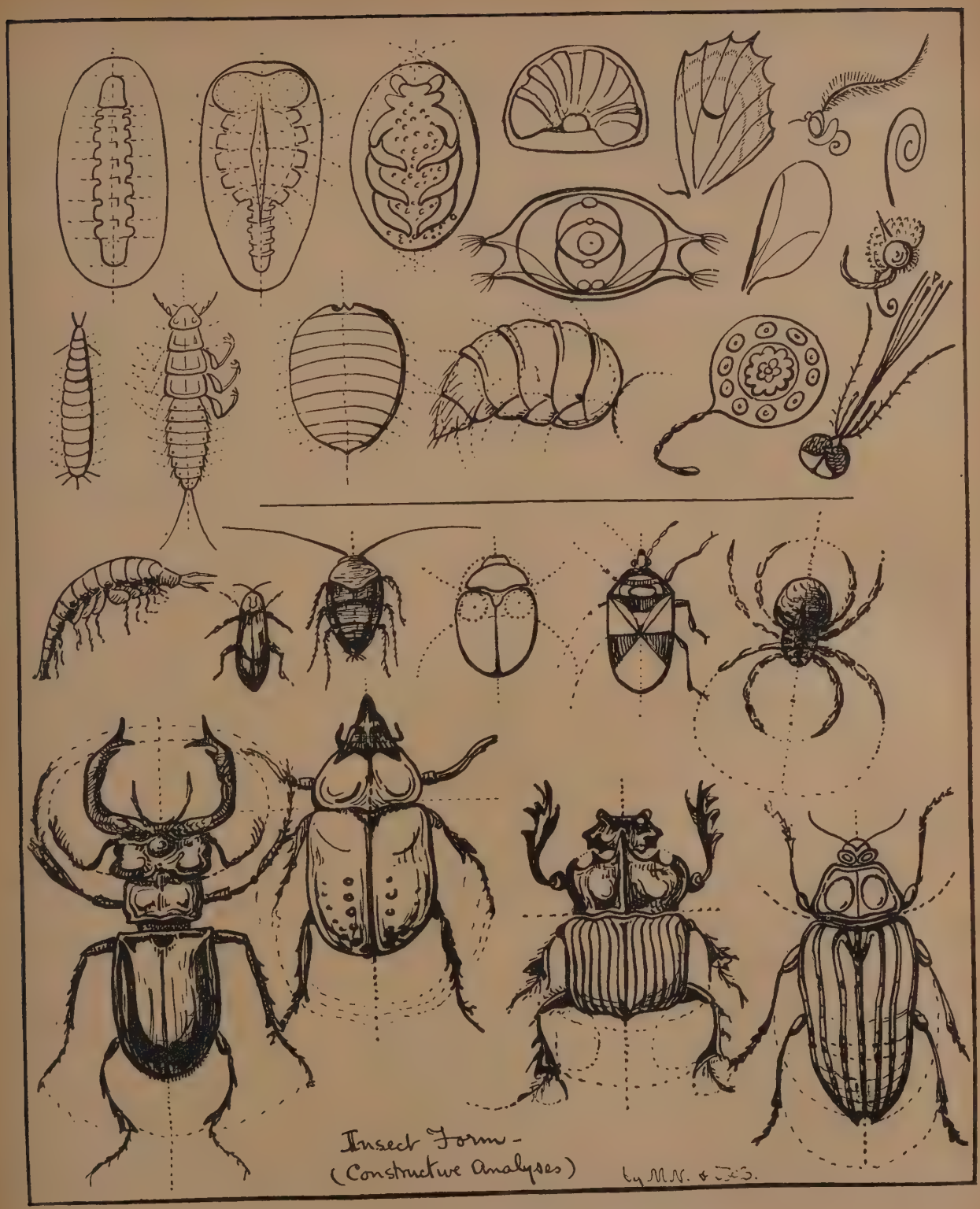


SOME FORMS OF FISHES

IN THESE insect forms Nature enables us to distinctly discern her methods of geometric construction and subdivision, secured before she overlays the outer husk of shell in order to retain her plans and markings.

It is most interesting and valuable, to the true art teacher, to call the attention of the class to the beautiful and fundamental processes by which, in the same way, all art creation and construction should be conceived and advanced, from *within* outwards—to final finish and perfection. The only sound art educational method is to proceed along the same organic steps as Nature has used, and by the same clear intellectual processes of insight and order. The external copying or artificial mimicking and blocking along the outer edge of forms without comprehending their inner life, is but a sham and shallow self-deception which betrays the student's growth. For it is not the mere outer edge but the growth of inner comprehension and feeling, in harmony with Divine thought and method, that can alone create and develop *original* (individual and natural) art.

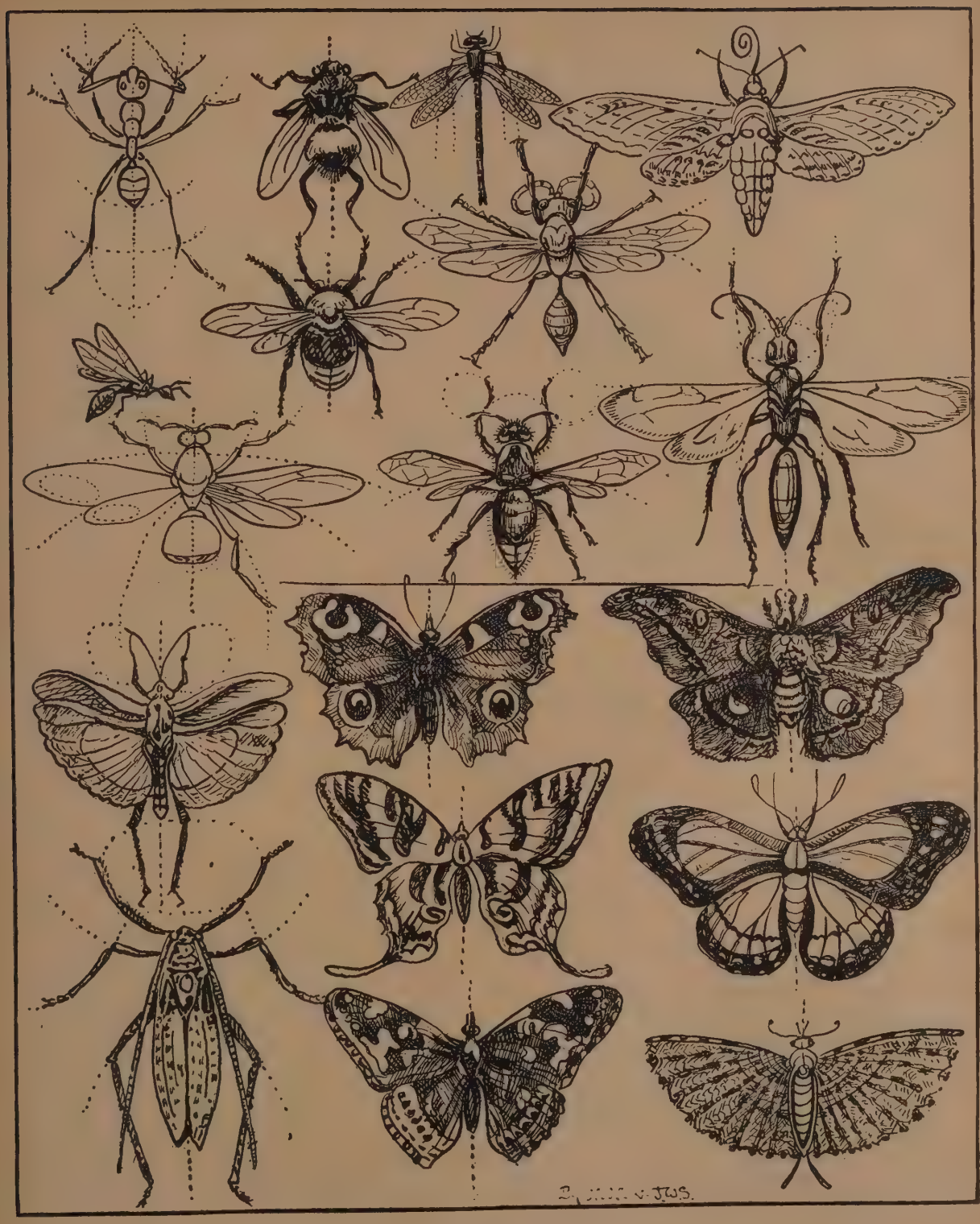
This spirit of self-improvement and comprehension of Nature can then be "applied" to the salvation of all materials and situations. It deprives blind and mimetic "art machines" of their stultifying power, and awakens everywhere the thoughtful, reverential and practical education of fellow-man, for *fellow-helpfulness*.



SOME INSECT-EMBRYOS AND FORMS

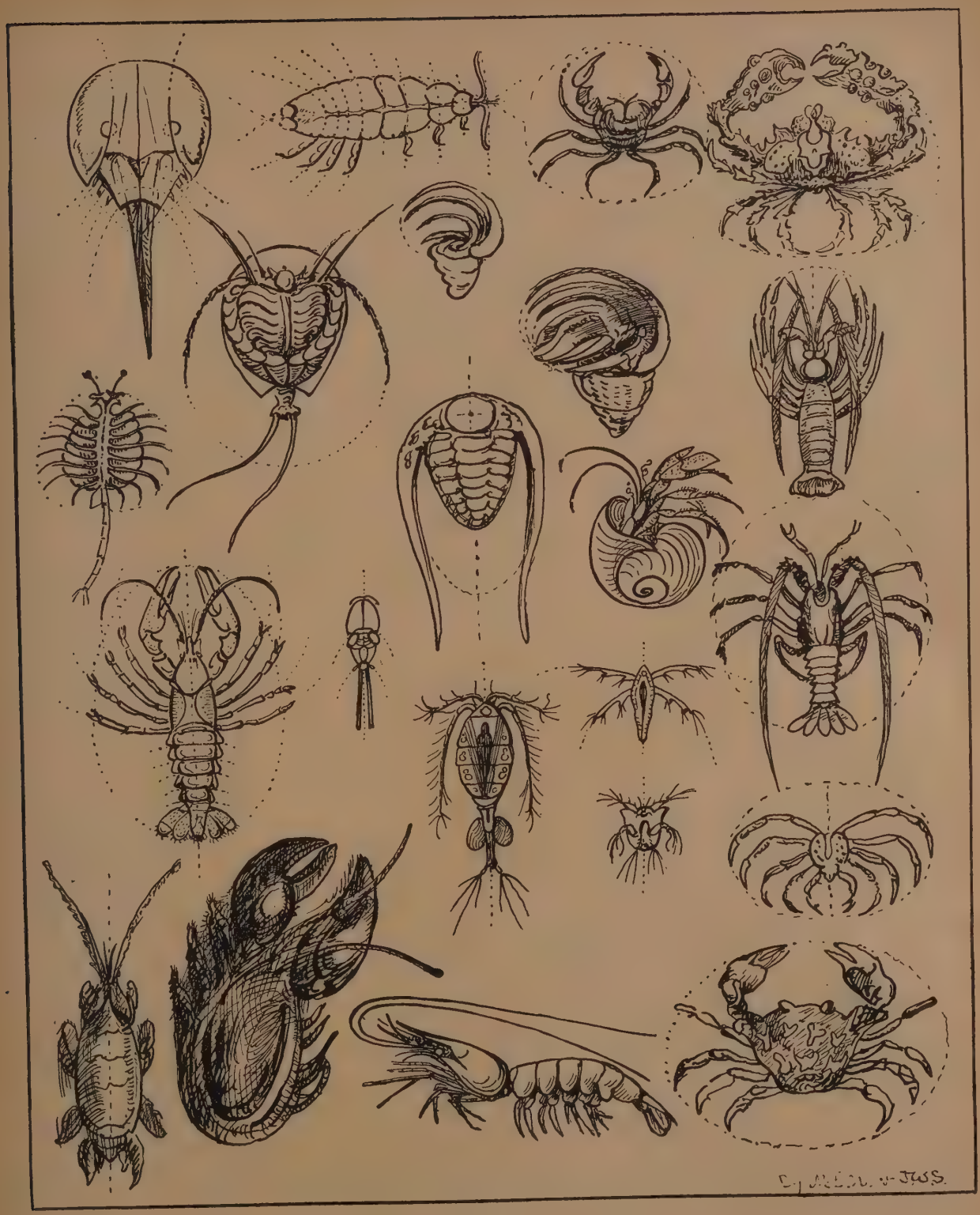
WE MUST notice in these higher insect-forms, the increasing delight that Deity takes in expressing a greater grace, lightness, and decorative design—to a degree superior to the lower and more crabbedly combative or voracious insects we have considered. The artistic methods of geometric construction, and the principles of symmetrical balance and decorative contrast, are now more beautifully and transparently evident.

It would be well, also, for the student, here to note especially, Nature's charming adaptations of color to surface design, form and character.



SOME FORMS OF INSECTS

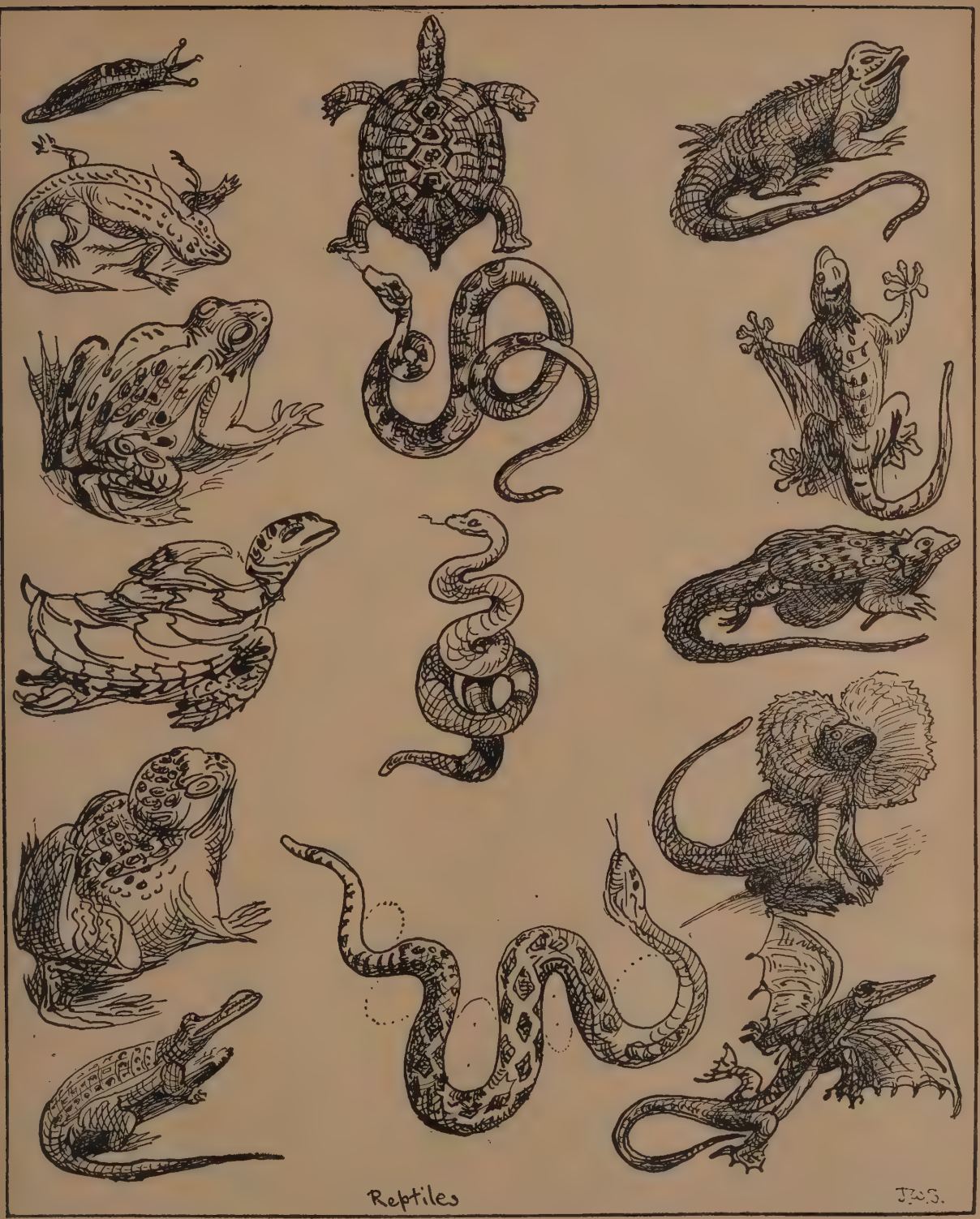
IT SHOULD be noticed in these crustacean forms that, as Nature delighted in the use of the spiral or volute forms in sea-shells, so here she advances a step forward in unfolding Force and in Form-Reasoning, by making most beautiful and effective use of Tangency—playing off from the circle, ellipse or spiral, and beginning more and more to *radiate*.



SOME FORMS OF CRUSTACEA

HERE we see the hard shells giving way to ductility and plasticity of form, mounting from the slothful snail or torpid tortoise—by ever brightening and complicating design and structure—through every phase of glittering serpent, up to the flying lizard and now extinct dragon. In all such forms of plastic and mobile life the impossibility of imitating them by any species of stupid external "blocking" becomes self-evident. The serpent itself is all a thing of *curves*, magnificently plastic and wholly surprising in its flexibility and mobility. The true artist alone can render him, by watching and *interpreting freely* this very element of internal movement and complexity (not externally relying upon any momentary accident of position).

By this living, internal and appreciative method the great Greeks rendered the free life and action of their battles and galloping cavalcades; and the Japanese still delight us with the dash and splendor of their decorative interpretations of natural scenes, impossible literally to imitate.



SOME REPTILIAN FORMS

AS WE ascend, esthetically, through bird-forms (viewing them especially for their artistic value and expressive character), we must constantly note the intention of the Creator to make them full of *dramatic and poetic symbolism.* He is an Artist, ever and throughout, whether he begins with the heavier and more awkward dodo or pelican, and emphasizes rapacity and brutality by beak and claw in vulture and eagle; or whether he swirls his water-fowl into more circular and curvilineal grace born of the dancing seas such forms inhabit; or bursts their light and varied frames into rapturous song, upon airy wings that conquer the ethers; or whether he deliberately taxes his ingenuity and decorative palette by the dazzling splendors of rainbowed hummingbird, peacock, and bird-of-paradise. Can anything be more striking than his contrasting the exquisite and tender wood-dove against the harsh cruelty of the vulture; or the song of lark and nightingale against the discordant screeches of owl and falcon? Finally he takes the purity and tenderness of the "dove" as the highest symbol of his own most precious and sympathetic Spirit.

SOME BIRD-FORMS

THIS same significant, esthetic and morphologic progression seems to run, and by parallel stages, the whole way up, to and through the higher orders of being. Inner changes beget corresponding outer changes, and the primitive ornithorhynchus—which blends fish, fowl and quadruped—or the amphibious seal and rough-hided monsters of the jungle give way to useful domestic animals of field and barnyard; and to the more and more refined and harmless pets of the home.

Not only do we notice that the male of every species is apt to reflect, through its form, a rigor and angularity more pronounced and less plastic than the feminine (because of the very energies of conflict which the rôle of the male begets), but that, generally speaking, the whole progress of a genus is from more rude and violent competitions to higher and more refined coöperations and coördinations.

Not only is the form of the male lion more attractive and resistive than that of his lithe spouse, but the whole category of ferocious and destructive beasts gradually gives way in order of ascending life, before the coöperative cattle, horses, even timid sheep and playful kittens.

The downward-burrowing, dark-loving and marauding rodent at one end is offset by the light-winged flying squirrel who at last enters the very realms of air.

SOME HIGHER ANIMAL-FORMS (QUADRUPED)

WE MUST now notice the rising attitude, stature, and increasing brain-capacity of the ape family; from its dog-faced and quadruped characteristics in earlier species up to the man-faced types and erect tendencies of its later species; till finally the discovery of the "missing link" or "man-ape" in Java seems to establish the consecutive series of form-evolutions which Darwin and Wallace detected, up the whole tree of life to the first types of self-conscious man.

As we compare the several stages of simian and human skull-growth—not only from childhood to maturity, but of darker with lighter races—it is easy to note that the lower, triangulate and bony portion of the face has, in the ape, a tendency to increase from youth to age over the ovate upper cavity of the plastic brain. In man this tendency is reversed, and his brain not only gains steadily in proportion over his more angular and bony jaws, from youth to age, but increases this gain steadily from his lower to higher types of civilization, and from darker to lighter and purer colors in his flesh.

According to the latest light thus thrown on life by morphology as well as embryology, it is probable that not only were all rudimentary functions and instincts subconsciously prepared for man through the ascending exercise and perfecting of the bodies of his friends the lower animals, but it seems to me reasonably implied that when the mass and capacity of the ascending and plastic brain *dominated* the more angular prognathous and downward-tending jaws, then the brain became conscious of itself and first *knew itself* as "Man." (See the next two charts and Lesson XXXVIII.)

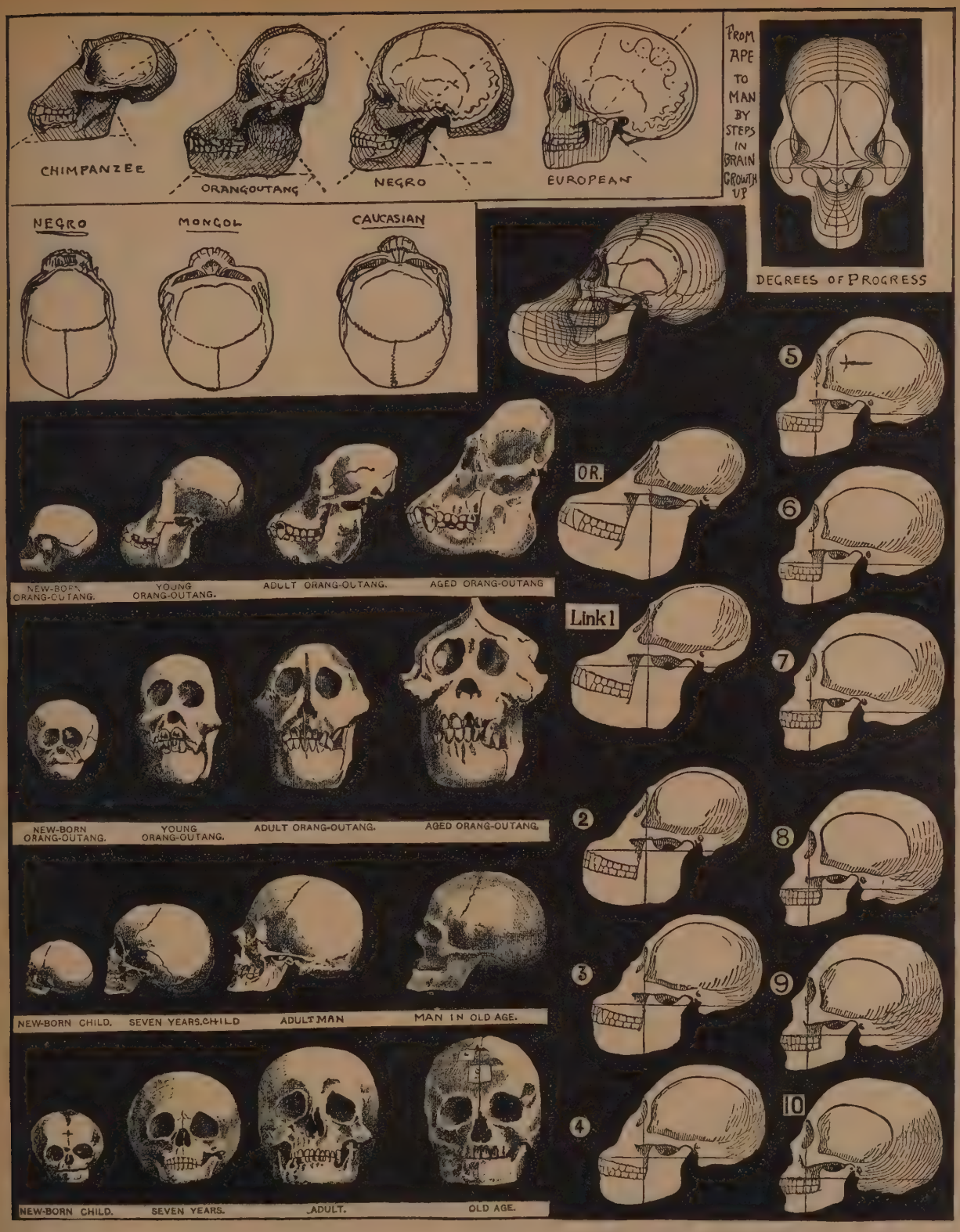
The naturalist Garner, spent years among monkey tribes, and proved that they can count (up to a limited degree) and show a fair sense of Form, by picking out pegs that fit certain holes; and also a sense of Music, by greeting some tunes with delight and others with disgust; and have developed a rudimentary language which, though very limited, is voluntary, articulate and shaded in dialects, so that it betrays no *intrinsic* difference from the language of men. He believes in "the Psychic-Unity of animate nature; a common Source-of-Life; a common Law-of-Living; and a common Destiny for all creatures. A fair specimen of the adult ape has about the same mental horizon as a child of one year. To dignify the apes is not to degrade man. A more perfect knowledge of these animals will bring man into closer fellowship and deeper sympathy with nature and cause man to realize that he and they are common links in the Great-Chain-of-Life. When once man is impressed with the consciousness that, in *some* degree, *all creatures think and feel,* it will lessen man's vanity and ennoble man's heart."

SOME APE-FORMS

THIS spiritual victory, in the brain, did not, perhaps, mean yet that it could maturely comprehend its triumph or even record its progress—save in and by the humble weapons, utensils and arts it then invented and left to us. Eons of time doubtless rolled by, during which man was little above his humbler but unself-conscious brothers, and during which, by mechanical perfectioning of his implements and by conquering or domesticating wild beasts to his primitive uses, he raised his crude, dark, bony and hirsute personality into higher regions of psychical existence. He crudely drew his artistic forms and concepts on bone, or mysteriously reverenced, by fetish and symbol, the creative Author he could only faintly conceive. Eating shell-fish, and outwitting the beasts that he could not muscularly master, he learned by the superiority of *mind over matter* that the only road of victory is the victory of the *Soul!*

Thus, by progressive steps and prehistoric purifyings, man's lower forms and even heavier colors probably gave way to higher concepts, conditions, clarities—of mind, heart, and outward flesh. And with each geological or racial stage has been found the appropriate and progressive proofs of his perfecting of his arts, his language, and his religious culture.

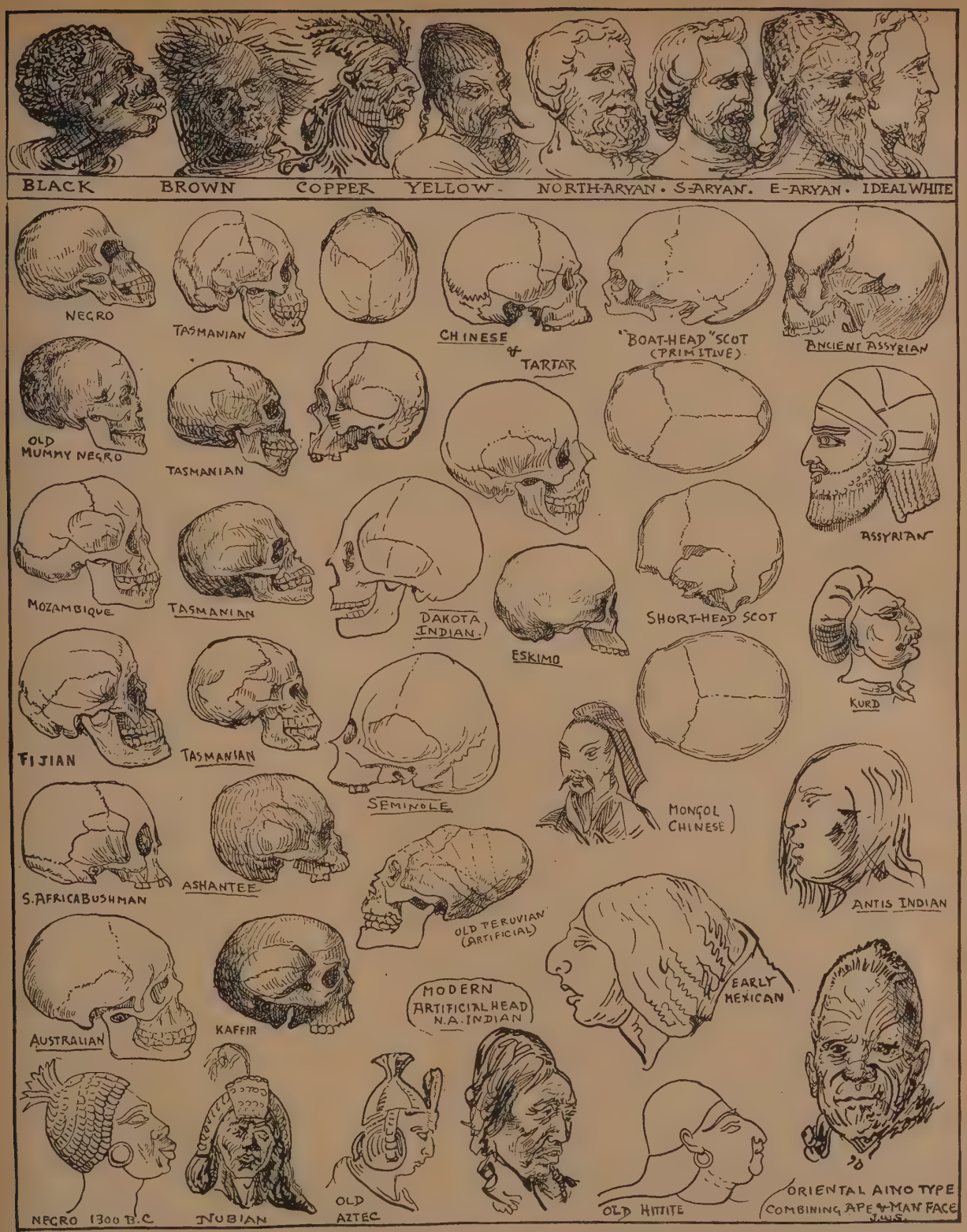
Through Black, Brown, Copper, Yellow, and then Aryan (White) branches running North, South and East, through colder Scandinavian, warmer Mediterranean, and luminous Oriental and Oceanic regions, he ever approaches more and more some self-perfecting ideal which "The-Divine-Man-in-the-Heavens" is pursuing through him, upon this earth. We are at last gravitating to a cosmic Whole, conscious of our mutual obligations and responsibilities as "brothers"—partners with God in a world-regeneration.



CONTRASTED SKULL-FORMS, ENLARGING WITH BRAIN DEVELOPMENT FROM APE TO MAN

NO LONGER, now, are we to look upon each other as enemies and strangers. We all have part and parcel in the grand historic growth, and all, as brothers, have responsibilities to hasten the self-enlightenment and self-development of the Whole family of man.

In this grand progression we can clearly see the *Divine intent*, through the whole animal kingdom, that the "survival of the fittest" *must include* those most essential attributes that come preëminently from *mind*, *heart and imagination*. Brute forces and selfish or rapacious instincts must give way to larger, broader, better and more comprehensive Manhood. The man who has the higher mind-force survives in influence and soul perpetuity over the grosser man of mere belly. But he who cultivates the largest heart-force and ethical nobility survives over the merely self-seeking brain, as Christ survives over Cæsar, and as Washington survives in human estimation over Napoleon. But, most of all, have those men and races enduring influence where the mysterious and penetrating forces of Genius and Imagination enable them to seize the *sublimity of existence*, and to conceive, in vital forms and living principles, the *Meaning and Methods* of God's constant inspirations. These open (through their own willing, sensitive, suffering and enduring spirits) *a Pathway for the Most High* to speak to, and to uplift, his groping, struggling, slowly-maturing "Household" of Faith, Love and Human Service.



CHIEF TYPES OF MAN, PROGRESSING IN FORM AND COLOR TO THE IDEAL WHITE

GLORIA IN EXCELSIS

"PRAISE ye the Lord from the heavens:
Praise him in the heights.
Praise ye him, all his angels:
Praise ye him, all his host.
Praise ye him, sun and moon:
Praise him, all ye stars of light. . . .
Ye dragons, and all deeps:
Fire and hail, snow and vapor;
Stormy wind, fulfilling his word:
Mountains and all hills;
Fruitful trees and all cedars:
Beasts and all cattle;
Creeping things and flying fowl: . . .
Both young men and maidens;
Old men and children"!

—*Psalms of David.*

CHAPTER VIII

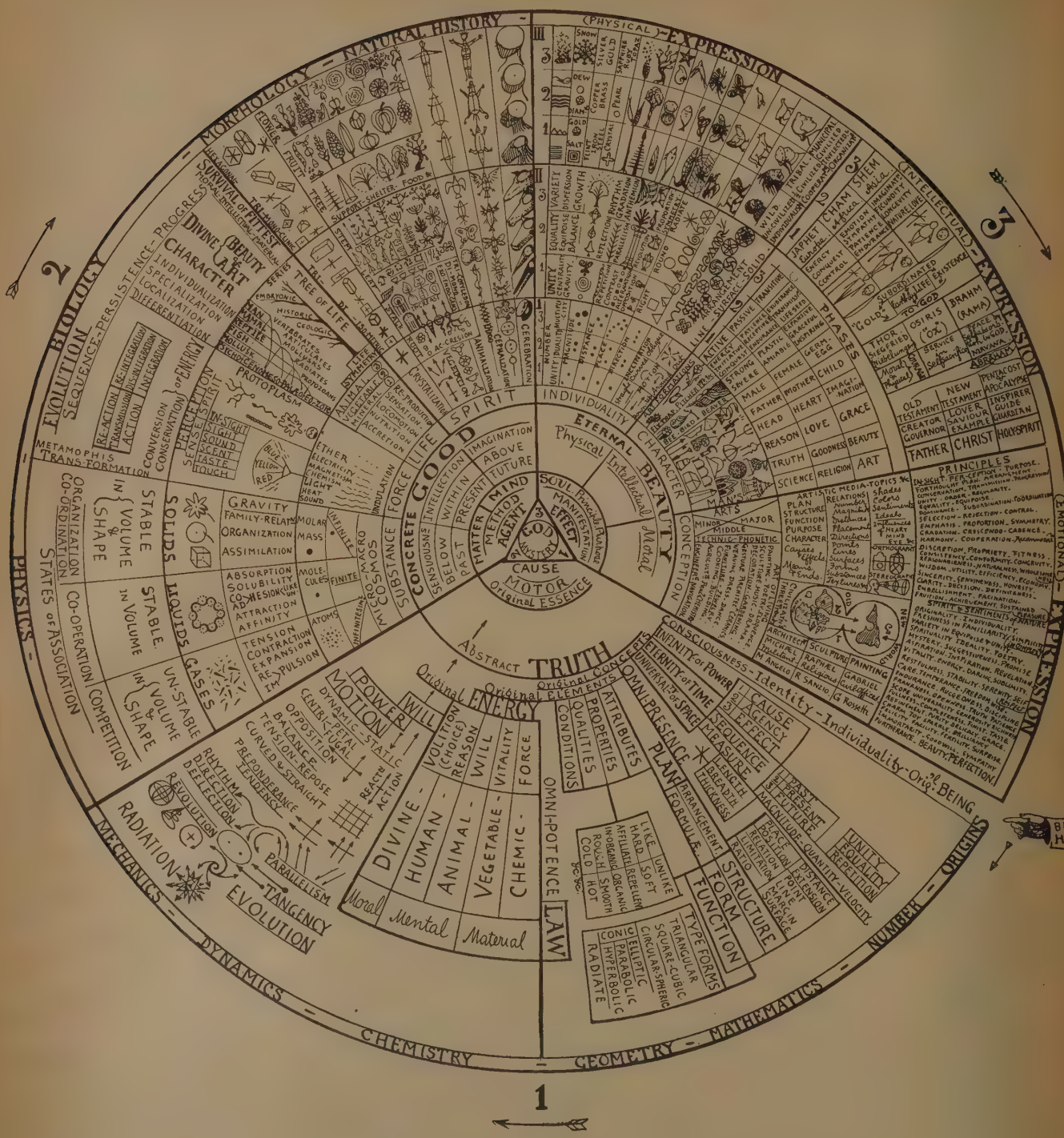
ESTHETIC EXPRESSION

BY

ART AND BEAUTY

"A true work of Art is a reflex of Divine Perfection."
—*Michael Angelo.*

"Spirit of Beauty, . . .
Thy light alone,—like mist o'er mountains driven,
Or music by the night wind sent,
Thro' strings of some still instrument,
Or moonlight on a midnight stream,
Gives Grace and Truth to life's unquiet dream."
—*Shelley.*

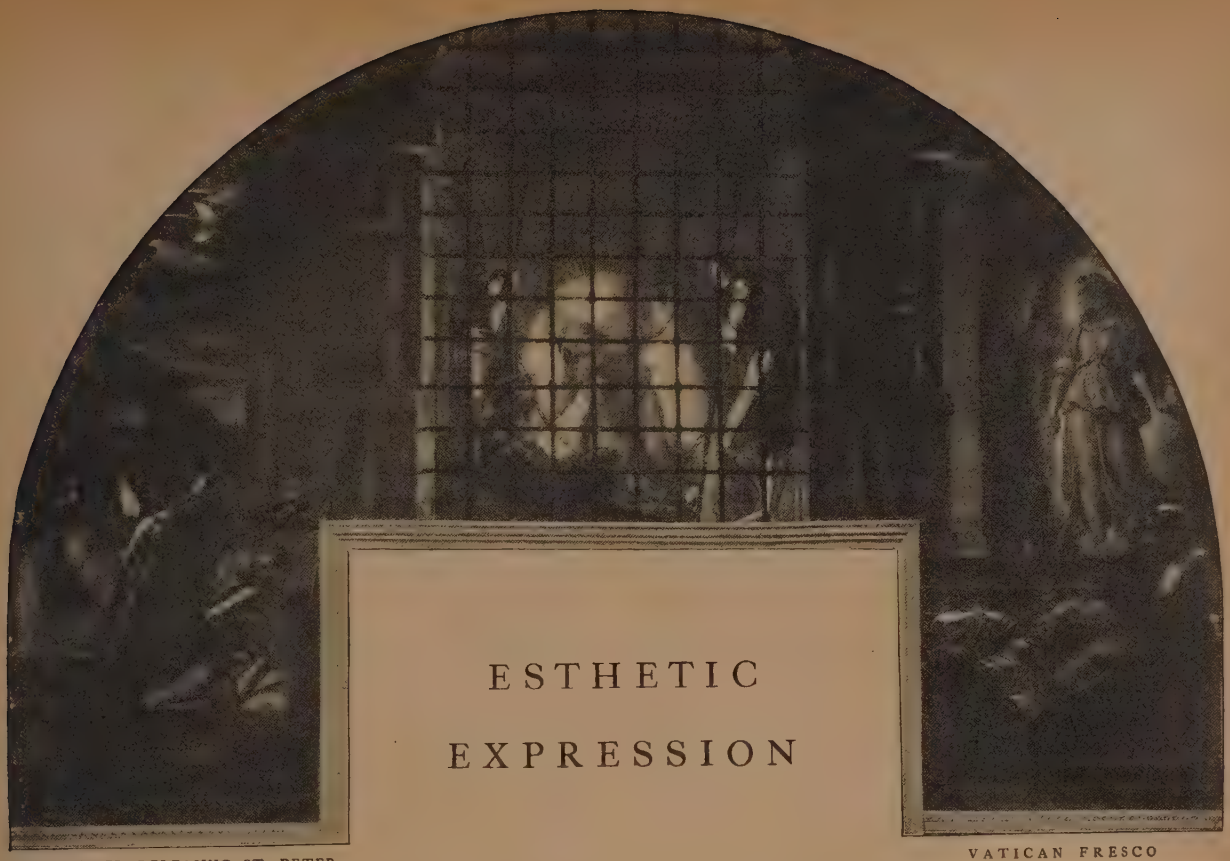


NATURE'S TRIUNE MANIFESTATIONS

(1) ABSTRACT TRUTH—in Spiritual Ideals, Relations and Volitions

(2) CONCRETE GOOD—in progressive, transitional, material Embodiments

(3) ETERNAL BEAUTY—in Perfected Purposes and Revealed Vital Principles



ESTHETIC EXPRESSION

THE ANGEL RELEASING ST. PETER

VATICAN FRESCO

WE HAVE seen from what primal energies and elements in Force and Form the whole tangible world of ART (celestial and terrestrial) has unrolled, forming the tremendous book of esthetic manifestations in form, color, sound, etc., which constitutes the visible universe, and which inspires man to perpetual wonder, interpretation and creation. Art Form was not merely phenomenon but a mysterious and universal utterance in which all nations and times find their place by mutual comprehension (however unintelligible to each other their local dialects of speech), because all alike were products of the same art Elements. They lived, moved and had their being in the same vast artistic stream, and still find, in all and for all, the same sublime legacy of universal, symbolic Expression.

As the Creator is an artist he naturally employs artistic terms and media, *i. e.*, the pictorial and poetic. All Nature is at once picture and allegory; as indeed is the Bible itself, for its writers constantly remind us of this, from Moses "lifting the serpent in the wilderness" to St. John's vision of "the golden candlesticks."

We ought not to have required the genius of a Swedenborg to point out these "spiritual correspondences" when the Bible itself declared so clearly that its foreshadowings were "symbols of things to come." "For it is written, that Abraham had two sons, . . . which things are an allegory: for these are the two covenants;" etc. (Gal. 4:22, 24.)

Had all truth been told at the start, and all knowledge been final, that very finality might then have stilled growth or dulled ambition in us.

The mist of human limitation hides the Mount-of-Glory, but thereby more appropriately enhances its splendor. As the Creator is a spirit, and must be spiritually discerned, so, as he is a poet we must approach him as poets; as he is an

artist we must view him through art; as a worker we must appreciate him through *work*.

We must recognize that our eye of flesh is but the outer window for the inner eye of Spirit or we drop back to the sightless mollusk from which life ascended, and discard eons of conquest the soul has achieved. To the literalist and materialist fumbling with mere atoms of ink, and recognizing no Intellect behind, God comes with rod of confusion and perturbation; but to the loving child whose sensitive intuitions read between the lines of Nature's book into the All-Father's *soul*, he comes with glory and benediction.

"All Nature," says Chapin, "is a vast symbolism. Every material fact hides a spiritual birth."

"Nature," says Emerson, "is too thin a screen,—the glory of *The One* breaks through everywhere!"

"Passions, seasons, senses," adds Crane, "virtues, vices, life and death itself, all belong to Allegory, continually reappear in newer shapes, being by nature so protean no form may hold them."

FACING this chapter we have inserted a helpful Circle Chart (after Hegel's symbol of "One Circle Common to All") as a sort of bird's-eye view of the soul's outlook on beauty as it considers the horizon of constructive and expressional form. The mysterious Spirit Creative reigns at the center of such origins in conscious being, volition, motion, force and form. We naturally divided the field of vision into Three Main Departments or segments of study, if only to recognize by pictorial suggestion the three main relations of thought and experience which have urged civilization on, in common with natural environment.

As artists we naturally prefer the third and last section of the chart, as we prefer the fragrant blossom and fruit of the tree-of-life more than its root and branches. But, nevertheless, it was essential to sketch those earlier phases in as a background or setting for the fruit. Indeed the truest atmosphere of any art must ever be the natural and appropriate environment which produced it; so that when we reach the highest art forms, in later ages, we can understand their force or beauty by recognizing the conditions in which they grew, (a principle of foremost value in criticism).

In the first and lowest section of the Circle Chart we located the intuitional region which belongs to each creature's consciousness of self, at the origin of its inner and increasingly *rational* life, where it is one with its Creator.

In the second (left side) section of the Circle Chart (page 162) we placed that region of natural embodiments and incarnations of developing life in which we beheld the bodies (physical forms and functioning structures) of Life's children, as they appeared on earth, progressing from gaseous to liquid to solid incorporations. They "sleep in the crystal, dream in the vegetable, and wake to life in the animal world."

In it we have a vast realm, lately correlated by physical science, where we briefly and compactly suggest the natural ascending order of life, where the practical art work of Nature is seen to give premonitions to brain, of vital principles which it will reapply in human art. It is also explanatory of the delight experienced and imparted thereby when identical elements are readjusted by man to express those principles.

It was this section of physical and biological creation, before the advent of man, that Moses may have seen in vision so long ago, when he exclaimed, "God saw every thing that he had made, and, behold, it was very good"—because man would first employ that term to cover the wise provisions for his *physical* well-being which that section displays.

In it we are able to catch some glance, pictorially, of the order and splendor of advancing Mind and Purpose, generating artistic Form—up from unstable volume and shape in gases; to stable volume but unstable shape in liquids; up to stable volume and form in solid substances. Thence to the higher qualities imparted to substance by advanced mobilities and distributions, reflected through nobler biological forms and kingdoms of life—through mineral, vegetable, and animal relations and the refining functions of accretion, nutrition, locomotion, sensation, and reproduction (geologically recorded). Fas-

cinating CHARACTER and INDIVIDUALITY begin to appear in the beauties of Morphology and Natural History, where crystals graduate into glorious gems; vegetation grows resplendent with perfecting fruit and flora; and animal life mounts by steps of brain-perfecting to loftier functions and utilities. Then finally we behold the form of man appear, condensing into greater splendor of harmonic adjustment the lightness, grace, strength and elegance of all preceding life, and reigning over all with resplendent reason, reflection and genius. At last he is capable of reviewing the past, appreciating his Creator, and (though "a little lower than the angels") is crowned with the glory and honor of Reverence, Comprehension and Inspiration!

In the third (right side) section of the Circle Chart we note the brain, mind and spirit of man unfolding at the head of organic Nature, and —supreme of all created things—nobly striving to scan and comprehend the steps and stages of advance; and to reverently look upward and inward for "the Light which lighteth every man that cometh into the world."

This is that light of reason, intelligence conscience and sublime communion with the great Originator of man and his fellow-beings, who blessed man by giving him rule over these works of Almighty Hand, and by comprehension of divine methods, spiritual principles and moral purposes.

We can note this genius in the soul of man, and even premonitions of it in his animal friends, modifying their own forms and the forms of their environment—voluntarily and constructively—to give expression to specific need and to new individualities or ideals. We have witnessed the Art of the Creator, we then witness the art of the *Creature*. Mollusks unrolling and decorating their rainbowed shells; fishes, reptiles, insects, birds and beasts taking specific style and character expressive of three prime categories of form, and giving unique style and significance to their nests and homes thereby.

Then man, the highest artist of them all, advances in intellectual and moral beauty through barbaric to civilized states, both of association and art expression, strewing the highway of his heavenward climb, with the utensils, weapons, costumes, dwellings and religious symbols corresponding to the degree of perception, inspiration and conceptive power attained by him in his growing epochs of advance.

The first section is the realm of Ideal Relations, Abstract Truths and Primal Volitions made recognizable in atomic quantities and motions, coëxistent with dynamic energy, and realized in force and form.

The second section contains the outline of concrete phases, in form phenomena and biological growths, every step of which has *its artistic reason and record.*

The third section is the realm of reflection, discernment and deduction upon these unrolling chapters, evolving forms, uncovered plans and perfected purposes which suggest and outline what we would now develop; viz.: the unfolded principles and methods of beauty alike in the studios of gods or men. These art principles, of course, were being employed and incorporated by Deity in Nature; and by flora, insect and bird in their various arts; but the races of men had slowly and persistently to discover, appreciate and realize them in labor.

BEAUTY is a very different thing from Art, or even from Individuality and Character in art.

All creative fashioning is Art (either in the lower or higher significance of the word); and that construction or combination of forms, colors, sounds, dramatic actions, etc., which conveys to other spirits a conception of an artist's imagination, may easily convey his individuality so that we recognize him in his work, or may so admirably express the organic social conditions from which he and his work comes as to give great character to his art, yet without really giving Beauty.

Thus a Chinese monster in bronze, a grotesque Japanese dragon, an Aztec idol, a Polynesian war-club may be crowded with artistic individuality, and even with the significant character of the age or civilization producing it, without at all

producing beauty. So the Divine Artist of Nature has designed (with quite equal art-skill, but with not at all similar intentions toward beauty) both the loathsome toad and the exquisite humming-bird. Indeed the former seems to contrast and set off the latter.

IF WE remember the all-important revelation of the science of the nineteenth century, that all visible substances are composed of separate atoms which never touch each other, but are held in variable relations (numeric, quantitative, qualitative, distributive) by a Spiritual Force which is ever the same (though differently named in different manifestations); and that it reveals to the mind and heart of man its own intellectual and emotional character by means of these very relations of atoms; we see that the all-important service of a true art-teacher is not to make mere technical experts in technical recipes and for external mimicries, nor to make foreign mannerists of students to speculate in fads, poses, fashions; but rather *to free students' souls* from this very slavery and degradation by revealing to them these wonderful internal and spiritual "Relations" which constitute *Beauty* above mere art alone. In short, to stimulate their own creative imaginations to see and to reëxpress for themselves and for their country the vital secrets of essential beauty, in bird-of-paradise or lily-of-the-valley, over essential ugliness in dragon and toad. These principles and laws are universal, and just as present and important for America as for Europe, and of course they are more appropriately and organically expressed in each country, in direct connection with that country's own climatic and social conditions. Thus beauty in Japan has ever the delightful subordinate flavor of the Japanese life. And beauty in Greece had similarly the flavor of Greek taste and qualifying local sentiment, without destroying the cosmic overruling laws perceived. Ugliness also can have its own conditions and be qualified by local color, as ugliness Greek or ugliness Roman, etc.

Never was there a greater mistake than that either beauty or ugliness is "skin-deep," or that there is "no disputing about taste." The elements and principles that constitute both beauty and good taste are eternal and universal, in spite of those lighter and superficial qualifications that give them individual or national flavor—just as we detect the divine beauty of any noble woman, which calls for *universal* admiration, even when it is allied with racial traits proclaiming her Greek, Italian, French or other.

It is of supreme importance that these supreme Principles be known and vitally assimilated by every nation, that each may keep free and characteristic while obeying universal law. We readily recognize the pregnancy of this truth in other departments of education than art education.

Thus the education of our youth in scientific or political or moral lines of public service is not conducted (by the best instructors) in such a way as to make them merely technically expert nor mere mimics of foreign situations, but rather in such basic principles of science, statesmanship or morals as to enable students freely and forcibly to meet every new problem for themselves and for their business or country.

So our West Point cadet or Naval Academy aspirant would not be crammed with technical data as to Cæsar's camp kits, Napoleon's accoutrements, or even the naval architecture of Nelson (as though such implements or incidents were ever to be duplicated), but rather grounded in those military and naval principles by which—under wholly different conditions of climate, country and equipment—similar results might yet be obtained, and thus be created a wholly new Washington, Grant, Lee, Farragut, Dewey, Schley. Nothing is more evident than that to obtain such *vital* independence and personal power for our art as for our science, economics, and ethics, we must abandon the shallow, servile or mechanical methods, which have constantly betrayed American genius for foreign mimicries, fads and affectations; and we must begin at once along newer and more vital lines, with deeper, broader, more vitally inspiring leadership, to study, to assimilate and to readapt to our own nationality those secret and sublime laws and universal

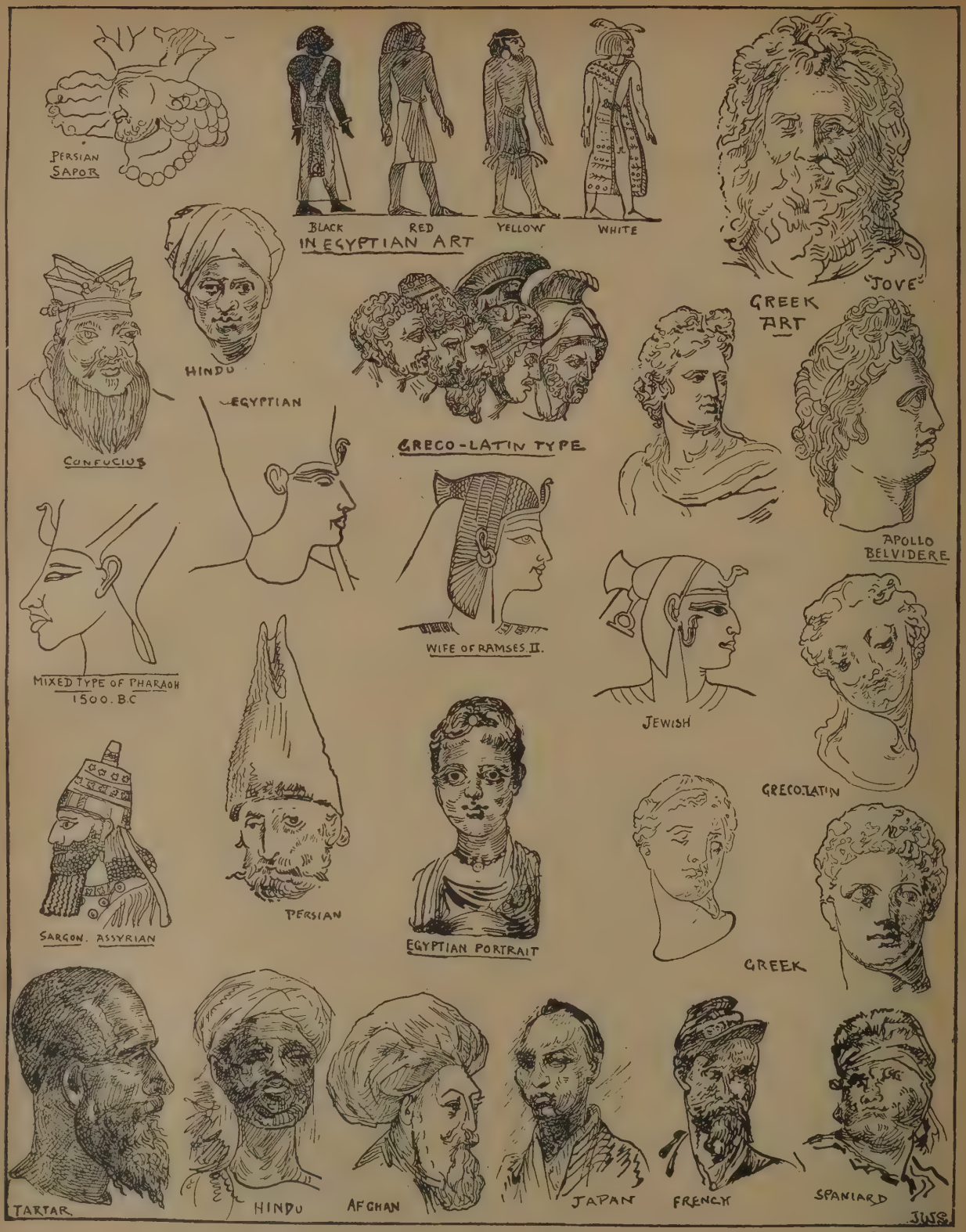
[See page 171]

SOME FORMS OF CONSTRUCTIVE ART

(By flowers, insects, birds, and mammals)

IT IS said that the scientist Lubbock, in studying animal life, has been led to "the conclusion that the difference between the minds of animals and men is one of *degree* rather than *quality*. On the whole he thinks animals certainly have some glimmerings of reason," as abundant clever devices with which they procure food, protect against danger, and shelter or hide their young, would imply.

"He has found some animals can hear sounds inaudible to us, and can perceive rays invisible to human eye. Atmospheric vibrations varying from 33 to 30,000 per second, strike the human ear and produce sound. Certain animals can hear vibrations more rapid than this, *i. e.*, higher notes than we can. So, vibrations on the eye produce color. These, measured by millions per second, vary from 400 to 700! By the thermometer and photography we have discovered rays beyond the Red and the Violet extremes of the spectrum. Animals are found sensitive to rays beyond the Violet end. It is, therefore, quite possible the world is, to animals, *full of music we cannot hear, of color we cannot see and of sounds we cannot conceive.*"



[See page 171]

SOME TYPES OF HUMAN HEADS (ANCIENT AND MODERN)

esthetic principles which constitute forever the subtle charm in the art of nature and history, and which forever allow for local flavor of soil and climate and for individual or social conditions.

NOW IN the arts of the under world, beneath man, indication of intelligence in the atoms begins *very early*—however much we call it intuition, as though it were some passive attitude beneath the pressure of Divine will.

As a whole, perhaps the mineral world suggests Fiat—by sudden growth in crystallization; the vegetable world suggests progressive Periodical Growth; and the animal world suggests steady, unimpulsive, Gradual Growth to well-balanced, symmetrical and full development. Yet Ruskin shows in "Ethics of the Dust," that crystals live, grow, decline, and have most marked individuality and character in their behavior or crystalline development for beauty—which seems to amount to volition, accounts for their fascination, and affects individually their market values everywhere.

"In a crystal," says Tesla, "we have the clear evidence of the existence of a formative life-principle; and though we cannot understand the life of a crystal it is none the less a *living* thing."

So the vegetable world that kindly prepares the mineral life for the animal, and that shows such charming patience and perseverance in the task, also reveals strange intelligence in much of its climbing and adaptive motions; marvelous ingenuities for sex fertilization; and devices such as the "Venus fly-trap" or "pitcher-plants"; and always a wonderful search for consistent character or deliberate beauty! Not only do leaves like the sensitive plant seem almost conscious, but some plants are found to manifest apparent pleasure or vexation at different treatments or personalities, as though the legend of Daphne were a fact and Dryads veritably lived within the plant. Their very wood-fibers are found to vibrate by some subtle atomic sympathy for wholly varied harmony or discord, in different musical instruments, that give them mysterious and inexplicable life and character and intimately qualify the beauty that can issue from them.

Of course, throughout all the orders of animal growth and art there is evident the greatest variety of intelligence and taste in constructive and selective skill,—from cells and homes of bees and ants, or skillful spider-webs and hinged trap-doors of tarantulas, up to the woven nests of birds; the glued and plastered nests of swallows and oven-birds; the beautifully-stitched and sewed leaf nest of tailor-bird, or deliberately decorated nest of the South African bower-bird; and all the clever constructiveness of prairie-dog, beaver and ape.

From thence man seems to have slowly but sublimely evolved, as we intimated above, in brain progression and appreciation; drawing back the triangulate or square-jawed brutality of face (in the prognathus ape-type), and expanding to nobler proportions the upper and forward sections of brain. An increasing Beauty and Shape, to oval head and virile features, comes in to reveal the characteristic types of race and personality. Not only their anatomy but their arts declare this clearly, as the relics are recovered from river-drifts and caves of countless centuries.

The latest conclusions of science on these human remains are that the throne of Thought became that most wonderful organ it now is, by steady stages of progression. In primordial man it was a "coarse congregation of gray cells" without much convolution. As mind activity quickened, the blood-flow increased. Man was then probably but a step above the brute, low-browed and cunning, short-statured, muscular, hairy and bent. But walking and throwing improved his spinal vigor in projecting weapons. The arboreal habit, the bending and recoiling branch, may have suggested to him the bow and arrow, though the latter was but a sharpened stick. Yet *this gave man the mastery over other creatures below him.* Later, his arrows are found chipped from flint, and the sparks may have suggested fire, though remains of his meals, found in the teeth of post-glacial drift skulls, had

not been disintegrated by heat, and were evidently eaten raw.

PALEOLITHIC man was a rude artist, carving on bone and shell-ornaments quaint drawings of leviathans of that day. The hot regions gave him fruit, but the cold compelled him to think and plan and hoard. He shivered and wore skins, and so gradually lost hairy cuticle on his unexposed parts. He built rude shelters and huddled into families and tribes. Fire, once utilized, cooked his meat and baked him pottery. Thought begat thought—wove his mats and sewed his pelts. Surplus wealth was stored and bartered. Trade brought travel and experience; lighter bodies and livelier wits. Lastly came devices of higher civilization against lower, with prudent defense against robbers by judicious use of lakes and mountain fastnesses. Then lakes required rude efforts at boats. Hence came maritime travel to newer or safer islands. Isolated or enforced tendencies aggravated and increased differentiation in habits and types; and the development of the race as a whole through countless years probably purified also the body's color, as spirit rose from internal darkness to light. Hence we find not only a steady ennoblement of physical types from Black, Brown, Red and Yellow, to final White races, but a higher temper of civilization evolving through higher religions, languages, arts and ideals. The struggle for higher survival compelled man to attack the mammoth. His conchoidal arrow-heads have been found imbedded in these monsters. Watching for danger, he did not, at first, note the movements of heavenly bodies. We do not find on paleolithic ornaments of bone or shell, the picture of sun, moon or star!

KING KHAFRA

"It was neolithic man who first looked up at the sky to observe the yearly changes. With his rude eyes he noticed the immense distances; the idea of space dawned on him." He peopled the far-off realm with souls of the departed, and in his own mind self-conscious and immortal soul was then probably born.

Post-glacial man buried his dead in sacred caves, faced them in orderly rows to the east where symbolic and sacred sun would rise to "dispel earth's darkness." He touchingly laid food and weapons beside his beloved, befriended or honored; and with the hopes of immortality and the comprehension of virtues came sense of Justice, Reward and Punishment. Conscience became a mentor, sacerdotal and symbolic rites were inaugurated in which the most pregnant and significant forms of Nature were used as helps, and sanctified by custom; and through them all a priest-guild collected to preserve or penetrate the mysterious spiritual implications, lessons, principles and methods. Ennobling these by generalizations based upon enlarging experience and deepening conviction, and purifying them by tests of operation and practice, these "seers" prepared them and themselves for the highest and holiest crystallizations of genius or of inspiration that must ever lead the human race on to higher and higher comprehension. From humble but reverential fetish, which we cannot but respect (however pathetic they appear), up to the highest temple rites and offices, the arts of conception and expression evolved in grandeur parallel with unfoldings of heart and brain.

The animals could not discriminate between themselves and Deity. But, on discovering himself, man was inevitably compelled to discover God and to recognize principles. Man's primitive groping was doubtless long upon the same

plane with the animals, and in animal sensations of delight in outward Nature, for his primitive weapons and ornaments indicate this. But his idealistic and imaginative faculties, even then show themselves early under way, in novel combinations and forms, in discreet selections of barbaric but harmonic colors and in nature adaptations. The spiritual faculties which divided the lowest savage from the highest brute soon created and diffused, through his art efforts, a consciousness of Spiritual Cause dimly divined and rudely grotesqued, of course, but sincerely worshiped in the detected principles of Order and Repetition by rhythmic dance, mystic fetish, ornamental totems, etc. These were derived more or less directly from natural suggestions and demonstrations in recurring seasons, planetary phases or withdrawals, and by myriads of natural decorative motives. He made keen conjectures into primal type forms, from which he must have suspected the familiar forms about him were derived, for he worshiped them as "Sacred," and incorporated them into his charms—veritable forecasts of coming science. Then in time his military, domestic, and sacerdotal implements became alive with artistic struggles to embody ideas of Proportion, Fitness, Adaptation, Harmony (both in design and color) stamped clearly with Originality and conscious Individuality controlled by Generalization. Good archæological museums abound in examples of these brave and impressive efforts.

TRIANGLE AND SQUARE EMPHASIZED IN COLOSSAL EGYPTIAN GODS

However primitive our ancestors, we must not consider them less sensible nor less sensitive merely because they were less informed than modern times. They seem to have frequently made up by integrity, directness and zeal of observation, for lack of art tradition; and at last to have attained by simplicity and grandeur of style, some art expressions among primal forms, which are at once the sublimest and earliest among classic embodiments. On the plains of Nineveh, Nubia, Egypt, India and Central America, by stupendous pyramids, temples, rock-hewn corridors and gigantic gods, they strove to portray their intuitions of *Deity*—as *Infinite! Eternal! Sublime!*

Where do we find anything more weirdly original, artistic, and expressive of vast though slumbering power, than the mighty Sphinx? Symbol of wisdom and patient strength, silently contemplative, controlled by intelligence, peering through eternal time across infinite space, and over the endless sands of life!

Or has any conception of artist imagination and toil attained more overwhelming grandeur than the three awesome pyramids themselves, that flank the Sphinx and look down from forty centuries upon the withering dynasties of men? Poised immovably upon massive basal Squares and presenting to posterity the clear-cut edges of an eternal Triangle, they seem to have been the symbol of an immortal *Trinity* men felt to be in God.

We find, too, in these early people, marvelous insight into the abstract geometric relations which are the roots of all Form-generation, and which become the very soul of the wonderful Oriental ornament. We find amazing powers of plan, construction, mechanical application of force to vast masses, for artistic effects of great dignity and durability, approaching Nature herself in grandeur of style.

When we behold the marvelously cut and superposed plinths and columns of Egypt, Chaldea and Mexico, piled in imposing splendor upon their ancient sites, or some graceful Greek temple crowning an Acropolis, we do not know which to admire most, the gems of genius in the brain of man or the setting provided them by the brain of Nature. The human art has something in it of the primeval majesty we find in the natural art of mountain or "Enchanted Mesa."

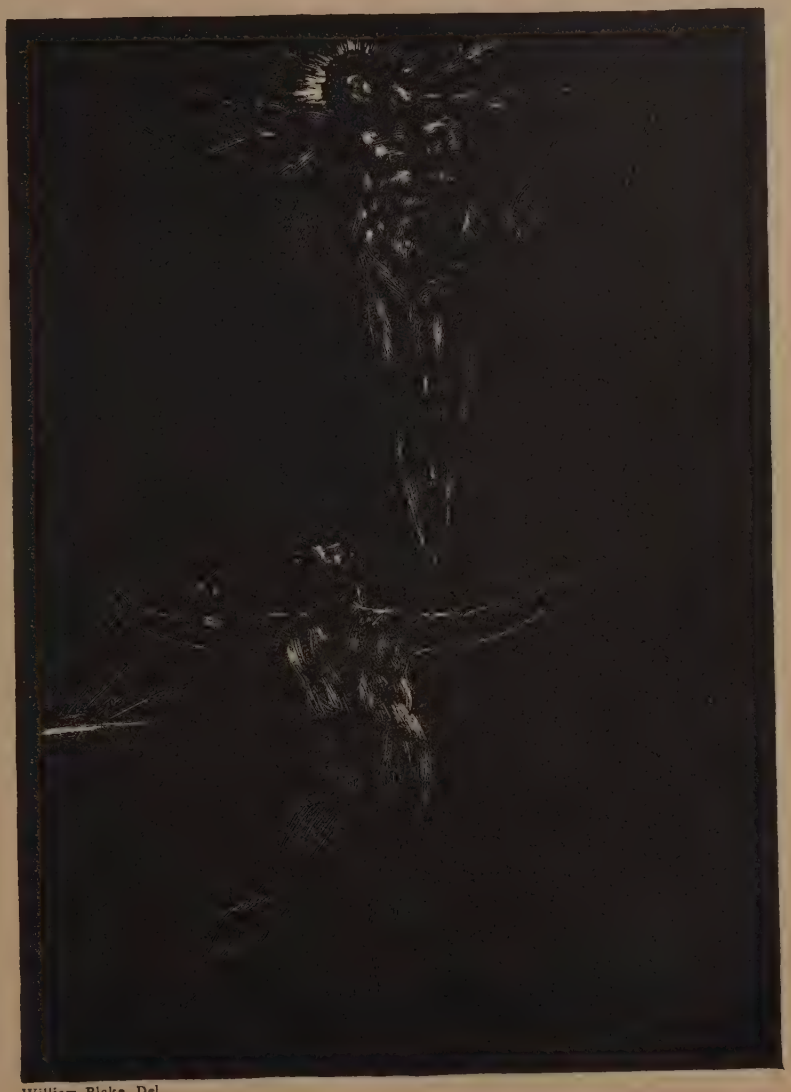
Up to the very age of Greece and Rome, the omnipotent Spirit was worshiped and personified in the obvious phenomena of Nature, in sea and sky, earth and air. But varied nations were all seeking and recording Truth. Along converging lines they march, led by the growing light! India discovers God's omnipresence in the minutest life; China his sub-conscious conservatism and reverence for the past; Scandinavia his progress and reverence for the future; Egypt his long-suffering patience; Magi his conquest over darkness; Mussulmen his solemn destinies; Greece his immortal beauty; Hebrews his moral unity; and Christians his comprehensive love and brotherhood. "Till we all come in the unity of the faith, and of the knowledge of the Son of God, unto a perfect man, unto the measure of the stature of the fulness of Christ"—he who declares the Almighty to be "one in being," but "Triune" in *phases of personality* for self-expression.

Law, Love and Grace reign at the center of the universe! They advance by (right-lined) resistance; (curved line) condescension; and (radiate) generosity, as the Divine Energy unfolds in strict Proportion, Balance and Harmony. All natural forms express these phases, derivations and combinations, and gain style and individuality by special fitnesses to time and purpose. Human arts receive and reflect these intuitions, and gain charm and vitality (or ugliness and decay) by their organic (or inorganic) adaptation of these fundamental relations to Structure, Form and Composition. Beauty is the sensation that the soul receives at *perfect and harmonic* adjustment of these to any given time, place, purpose, and material. It is the *manifestation of perfect law according to appropriate conditions.*

DIVINE thoughts, feelings and ideals are taking harmonic expression in Nature and man. Those of man are taking more or less harmonic expression in art, according as man reëchoes Divine principles. And all forms, natural or human, convey this perfectly only when truly organic—that is, perfectly harmonic *within and without*—alike in the *internal* structure (we term scientific) and the *external* fascination or attractiveness (we term artistic). In reality, the whole is scientific and artistic *together*. The devout, loving and useful application of these elements and principles in serviceable union for human amelioration or for Divine adoration, is Essential Religion—far above pettiness of cant, creed or sect, or even of nationality in experience and expression. In this grand sense "*laborare est orare*" (to labor is to pray).

Toward this far-reaching intuition the ages steadily advance and the unfoldings of race movement approach, leaving their several degrees of approximation for history and Divine judgment.

It is this which Nature had really been telling us all along had we but looked clearly into the



William Blake, Del.

TERRESTRIAL AND CELESTIAL MAN

M. Angelo, Del.

CHRIST RISING IN BEAUTY OF FORM AND SPIRIT

Great Book about us. And, as shown in the preceding chapters, we now recognize that spiritual and intellectual beauty (whether manifested within by morals or externally by arts) depend alike upon kindred principles which balance proportion and harmonize the rigors of individual and egoistic "Competition-for-Right" with the yieldings and "Coöperations-for-Love" (through duality, domesticity and sex), with the altruistic "Coörganizations (complex life) for-society-and-brotherhood."

The Three Prime Relations of will, at the commencement of life, which give direction, intent and meaning to force and form, in external nature, seem just as steadily operative to-day, to give character to every personality or race.

Competitive,
Coöperative,
Coördinative

relations of atoms, at the start, which become in later family relation

Dominant male Fatherhood,
Receptive female Motherhood,
Volatile and expansive Childhood;

and also become, in traits of temperament,

The practically Active,
The passively Amiable,
The impressionably Imaginative;

give later, in social aggregation and evolution, very marked peculiarities to

Northern,
Southern,
Oriental

civilizations, during racial and geographical expansions. The margins of such influence, will, of course, overlap and interlace by fusions, marriages, etc., but central characteristics will prevail, and racial types remain marked, where subordinate branches blend.

National Genius will reflect this degree of pure or composite derivation, in the characters and qualities of its energies—typically forecast. Social, religious and esthetic ideals will correspondingly vary with each step that prepares our mind for the later amalgamations which modern unity and democracy is effecting.

External forms forever change to internal necessities. Expanding commerce and closer interdependence creates solidarity and Brotherhood, adjusting its forms to ever higher and subtler proportions which portray in stupendous summary the outlines of Omnipotent Design.

In the poetic lines of Emerson's Woodnotes:

"If thou 'wouldst know the mystic song
Chanted when the sphere was young. . . .
'T is the chronicle of *Art*. . . .
Onward and on, the Eternal Pan,
Who layeth the world's incessant plan,
Halteth never in one shape,
But forever doth escape,
Like waves of flame, into *new forms*."

The poetic figures of remote Hebraic tradition which hand down three great Race Migrations, under patronymic titles, to the white sons of Noah, viz:

Japhetic to the Northern "islands of the Gentiles;"
Hamitic to the Southern "lands of Misraim," or Africa;
Shemitic to "the mountains of the East," or India;

will now grow more intelligible, in the light of modern ethnical research and comparison.

THE THREE highly significant and suggestive tendencies and trends in Force and Form which we discover in earliest primitive symbols are forever reappearing and reasserting themselves with marvelous pregnancy and persistency in the higher and higher concepts of human art.

Thus the gifted English decorator and poet, Walter Crane, very truly says: "Pattern in its simplest form, regarded in the abstract, is a series of modifications in the structure and correlation of line. Man need look no further than sun and sea to find the genesis of Pattern. Nay, his own frame, as Vitruvius shows, comprises or is comprised in both Square and Circle. These may be said to divide the responsibility for the whole race of pattern systems between them as a kind of Cœlus and Terra. These are suggestive, too, of different characteristics of race, language

and civilization. Broadly speaking, the Square, with its divided checkers, zigzags and diapers, might almost stand as a symbol of the ornaments of Northern nations, associated as the former are with Scandinavian and Gothic pattern work; while the Circle, with its derived scrolls and spirals, seems figurative of the greater suppleness and sensitiveness to beauty of the Southern. And it is to ancient Greece and Italy we must look for their most perfect types. Square and angular patterns strike us at once by their *emphasis and rigid logic*, while circular and curvilineal types appeal to *rhythm and grace*."

This groping of a true art instinct was bringing him directly to the great elements which we have tried to arrange and define somewhat more fully and systematically in this book—when "sun and sea" will be found to be the children, not parents, of the Square and Circle; and where also the third great prime relation and type form, the *Star*, will be located in its right connection, and given its full significance and resplendent beauty. It was probably for this last relation that Mr. Crane was feeling in his concluding clause where he adds: "For Richness and Intricacy we must go—where perhaps Square and Circle came from—to the home of the Arabesque, *i. e.*, to the East."

Along similar intuitions Prof. Max Müller must have been moving when he wrote, on India: "As in Nature there is a 'north and south,' so there may be two hemispheres in human nature, both worth developing; the active, combative and political, on one side; the passive, meditative and philosophical on the other. The Aryan, whom we knew as Greek, Roman, German, Celt, Slav, active and political in northern migrations, we find passive and meditative in India. A real natural growth, I believe, *having hidden purpose and lesson*. If I were to ask myself from what literature we, in Europe, may draw that corrective which is most wanted to make our life more perfect, comprehensive, universal, more truly *human*, a life not for this life but a Transfigured Eternal Life, I should point to India."

With similar point Lafcadio Hearn writes: "The man of science cannot ignore the enormous suggestions of the new story the heavens are telling. He finds himself compelled to regard the developments of what we call *mind* as a general phase in the ripening of planetary life throughout the universe. The oriental mind has been better prepared than the occidental to accept this tremendous revelation—not a wisdom that increaseth sorrow but a wisdom to quicken faith. And I cannot but think that out of the certain *future Union of western knowledge with eastern thought* there must proceed a later [faith] inheriting all the strength of science, yet spiritually able to recompense the seeker after truth with the recompense foretold in The Diamond Cutter, 'They shall be endowed with the *Highest Wonder*.'"

Which recalls the words of Coleridge: "In wonder all philosophy began, in wonder it ends, and admiration fills the interspace! But the first is the wonder of ignorance; the last is the parent of adoration!"

And so Prof. Austin Phelps may be guided by the same star to a fuller day of truth, in his words: "For the foundation of a life of joy in communion with God, we need more of the spirit of the Vision of Patmos. Our Northern and Occidental constitution often needs to be restrained from excess of phlegmatic wisdom. I think we must have something to learn from the impulsive working of the Southern and the Oriental minds. I must believe it was not without a wise forecast of world necessities and insight into *human nature all around* that God ordained the Bible, which contains our best models of sanctified culture, should be constructed in the East, where emotional natures can be broken up like the foundations of the Great Deep."

TO BE more accurate and full in the comprehension of these three symbolic race trends and missions—we should say that the competitive energies and severe practical logic, symbolized by the rectangular Square, have been most felt and developed by those Japhetic people which spread through northern Europe and are, to-day, characterized by cold, stern downrightness, business

L. O. Merson, Pinx.

DETAIL OF "THE REPOSE IN EGYPT"

("Out of Egypt have I called my Son"—*Matthew*)

logic and intellectual science, as well as by military energy and governmental grasp.

But the more feminine and social civilization, with plastic and mobile temperament, qualified by "Heart" rather than "Head," and by religious rather than scientific genius, have rightly the Circle for symbol, and are more reflected through the great temple-building branches of the second (or Hamitic) race which expanded so centrally over Syria, Phœnicia, Egypt and the Mediterranean coasts, crossing and blending their margins of influence with Japhetic neighbors to the north in Greece, Italy, Spain and southern France, and by the competition of war and peace obtained a knowledge of each other's genius and enlightenment.

While eastward—over Persia, India and Asia—radiated the influence of the still more imaginative, volatile, metaphysical, poetic and artistic third-race-type (the Shemitic), whose symbol is the Star, and from which the Abrahamitic (or Hebraic) branch was ultimately led forth to establish faith in the Oneness of God.

BY PROGRESSIVE stages of revelation and realization, this last (Abrahamitic) family seems destined to collect, correlate and compose into one the severed fragments of the faiths, missions and characteristic beauties of each brother race; as well as to set in order their specific developments of truth. For they found already growing, to their north, the ethical culture and social character typified by the Square and idealized into sacred sagas of Odin, Thor and the Walhalla of militant heroes, who among the very glories of heaven must forever reassert (by death and resurrection in chivalric battle) the beauty of individual rectitude, truth, courage and masculine energy implied in the Square. Of these the race-hero Siegfried must ever win his ideal love Brunhild, and his ideal Hero-heaven, against the crude and chaotic forces of untamed forests, dwarfed and cunning men and the temptations of gold, till Spirit rises dominant and purified as though by fire.

On the other hand, to the south and southwest, throughout Egypt and its tributaries, the Hebrews found a vast and patiently prolonged civilization, where human intuition and reflection had recognized more clearly that side of Deity which the Circle might typify. Here God was not felt so strongly (as by the northerners) in his character of *judge* and *warrior*, but rather more in his condescending and self-sacrificing patience as *intermediator*, where through long centuries (under the title of Osiris and the symbol of the patient Ox) he is represented as stooping himself to draw the burdened chariot of humanity and put his own shoulder beneath the yoke, to teach submission to central law. His symbolic "horns" of power appear derived from the growing crescent of the feminine moon, and from the perimeter of the "Sacred Disk" (or circle).

Here Abram was to find this Egyptian concept a harbinger and prototype of the Messiah to be born from his own seed in the person of the coming Christ, when he journeyed from Padan-aram southward with Sarah "his sister and wife." Here she was (symbolically) to be acquired by the Egyptian monarch and then returned to him unprofaned. And here Joseph and Moses, later, are mysteriously to be "subject unto" Egypt till, in the fullness of time and destiny, the Christ-child himself was consecrated, that the prophecy of centuries might be fulfilled: "Out of Egypt have I called my son." For verily, here, long centuries of discipline had not only developed in the soul of Egypt the ethical conception and character of enduring patience, and subordination of all terrestrial life to the hope of a celestial, but also had cast this into sublime art symbols and resplendent tombs far more elaborate than Egyptian earthly homes. And here, in the providence of over-ruling Soul, Abraham's race was to learn the great lesson of the Circle that: "Here have we no continuing city, but we seek one to come," even "an heavenly"; and: "By *patient* continuance in well doing [we] seek for glory and honor and immortality, eternal life."

Lastly, in their own promised land of Canaan and at the mystic Christmas-tide of the Messiah's advent, the Hebrews were to absorb the last and sublimest symbolic lesson of all; viz., the lesson

of the *Magi*, of the wisdom of the *East* and of the sacred *Star* of Heaven. That the soul of humanity must also be guided, in its sacred discovery and worship, by the deep and pure light of refined metaphysics, delicate deduction, subtle implications of planetary movement, the breathing of God's voice in the mulberry leaves, the divining of the inspirations of sensitive *Spirit throughout all Nature*. Herein they were to catch up the revelation of that third great (oriental) trend of cosmic thought and experience, which had subordinated all existence, heavenly or earthly, unto Deity in a devout Pantheism; and by the "absorption" of all spirit finally into Universal Brahm. Under the royal type of Rama it had also generated and fixed its ideal hero as that noble character which *hides* its very royalty, and *sacrifices* pride, position, power and wealth *in humblest services* toward suffering fellowmen. Here, as it were, again we see divinely antetyped that sacred significant theme of "the Christ washing his disciples' feet."

It was these three sublime ethical intuitions of truth which had been forecast throughout all morphology, biology, and sociology, in the advance of animal life and human conscience, that faithful Abraham and his children were to *unify* and crystallize—and which were to render their ethics so *vital* and pervasive by their revering:

(1) The beauty of the Square—in truth, law and judgment (under Moses),
(2) The beauty of the Circle—in love and self-submission (through the Christ),
(3) The beauty of the Star—in grace, genius, personal inspiration of the Holy Spirit

(by Pentecostal showers and radiate missions of apostles, martyrs, saints, heroes of all ages; down to this latter day when is promised a new outpouring from on high,—"Your young men shall see visions, and your old men shall dream dreams").

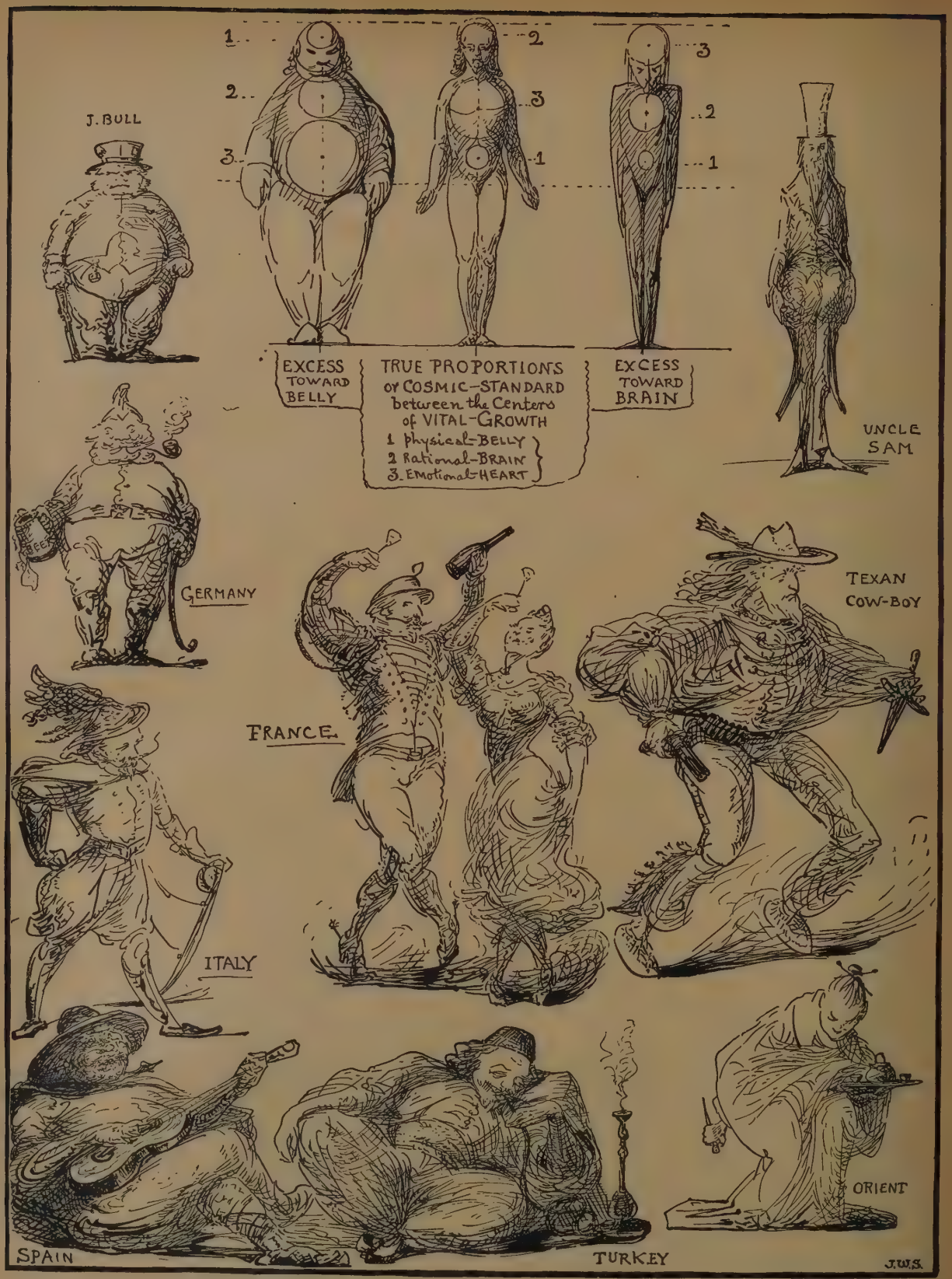
To the end of life, each soul finds within its being the absolute necessity of experiencing and reëxpressing—in right proportion and harmony to time, place, and service—the Three foundation elements (of Law, Love, and Grace) which seem *inherent in the nature of Deity*, as they are the primary Keys to the constructive relations of Form and to the significant character of Beauty.

THE OLD world was the scene, for ages, of the competitions and rivalries of these separated elements in racial evolution, while yet each segment was under the necessity, so to speak, of developing and assuring its own fractional truth and genius before comprehending and correlating with its brothers.

But Christianity in its marvelous growth and example seems to have prepared a soil, in broad ethical unity, for their ultimate amalgamation; and by collateral agencies in crusades, missions, commercial associations, etc., to have assured their commingling; as by the heroism of Columbus and zeal of religious colonization it outran destiny and opened a new world for their harmonious combination.

The northern (Japhetic) elements of the Square—by Norse, Teutonic, Saxon, and Celtic derivatives—were borne across to appropriate habitats and climate in North America. The southern, milder and more Hamitic derivatives of the Mediterranean coasts, were swept over into Central and Southern America. While across the Pacific and radiating through her myriad isles come the children of the Third great (oriental) phase of civilization, pouring into "The Golden Gate."

The circuit of the globe has been completed by the linking of its segments—each section bringing, to the commonweal of human brotherhood, the characteristic elements, either of "Saxon sense with Teutonic stability"; or Latin "religious enthusiasm and sociability"; or oriental "imagination, art, and industrial skill." While freedom of thought, aspiration, and government, in the new world, facilitates and necessitates a new cohesion; reacts upon the old world by example, emulation and international exhibitions; and interposes providentially to push the bands of conflict and commerce (as in the late accessions



PROPORTION AND DISPROPORTION IN HUMAN TYPES

(Recognized by popular caricature)

of Hawaii and the Philippines) into a broad unity which will perfect the whole.

Prof. Fenellosa, writing of this juncture of America with the Orient, and of the prospective alliance of the great republic with the best and most progressive spirit of the Orient, says: "Our lot is thrown in with the Eastern world, for good or ill, forever. For this fusion is not only to be world-wide but *final!* Each absorbs the power and hope of a hemisphere. Such as we make it now it must remain. This is man's final experiment!"

It was "westward" from his oriental race that Abraham started, "in faith" at the call of God, to go "not knowing whither," but "a child of promise." And westward ever, in the footsteps of his ethics, "the star of [spiritual] empire takes its course" till, in the symbol of the Wandering Jew, the journey is nigh complete and the pilgrimage ended. The Japanese poet would add: "Son, the world is full of beauty. There may be gardens more beautiful than these—but the fairest of gardens is not in this world—it is in the garden of Amida [God], in the Paradise of *the West!*"

THESE great historic evolutions have left art monuments of inestimable significance and value, all along their course, and have reflected their internal character and stages of growth through their external physiognomies and art environments, as truly as a mollusk does by its shell. (See Charts XXXVIII. and XXXIX.)

Distinctions in nature, color, costume, taste and general being, still remain more or less indicative of primal type and temperamental differences. The Northerner is liable to develop more tall, bony, angular proportions, and with more rigid costume lines and somber colors, characteristic of a more stern, introverted, calculating, solemn (at times melancholy) temperament; practical, scientific, militant, governmental, "square-shouldered," "long-headed," "far-sighted," "blue-eyed," worshiping the Future, and given to the arts of war, mechanics, transportation, engineering, etc.

The second, or Southern type, is more plastic, polite, tactful, diplomatic, social, genial, and of generous impulses, (perhaps of effeminate tendency), characterized by rounder forms, easier costume lines and warmer glow of skin and eyes; given to the arts of religion, civil policy, society, amenity, diplomacy, display; and greatly cherishing the amiabilities of the Present.

The third, or Eastern type, is lighter, more delicate and sensitive than all, more naturalistic and complex like Nature herself, more volatile, subtle, metaphysical, poetic, imaginative, artistic; marvelously diverse and dexterous in tasteful industrial skill; sunny, childlike, and rich in costume, color and movement, worshipful of Omnipresent Spirit, reverential of the Past.

While fourth and last, the Abrahamitic branch of this third great family is divinely driven to the four corners of earth, to become at once the most diffusive and cohesive, the most cosmic yet the most tribal, the most broken yet the most absorbtive, adaptive and retentive, of all social organisms and nationalities, in order to "gather together in One"—purity of Faith—all the "family of God."

We ought here to note, that just as each wholesome personality recognizes in itself a union of dual Elements (spiritual and material); a side on which each soul is individually itself yet another side on which it is the product of society; so each race has at times seemed conscious of its own race-genius being somehow correlated to the others, by mutual and complementary necessities which only time and civilization could make clear. They seemed subject to a first law of Competition which should be sufficiently strenuous to preserve individuality, yet drawn by time and world evolution into a cosmic Coöperation and Coördination which should at last guarantee the larger whole.

Nature was forever whispering the secret of her primordial Activity and Passivity, her Paternity and Maternity, her Initiativeness and Receptiveness, in day and night, seed-time and harvest, summer and winter. They witnessed her acts and arts consummating this mystic marriage—

and as well the arts of animal life below man. They soon conjured poetic figures, in mythological terms, to convey this perception of Divine principle, and we have the symbolic rites of "Cœlus and Terra," "Orpheus and Eurydice," "Adonis and Cytherea," etc. In time they detected that human arts, in order to impress the brain as beautiful, must embody analogous Relations, in "closed" and "open" spaces, quiet elements contrasting with active in the composition, shadows with lights, cool with warm colors, etc., creating cadences and equilibriums in which life pulsation itself is based. The brain is so constituted as to require, for its delight in art, reëchoes and revivals of what has given it both pleasure and existence in Nature, *i. e.*, conditions of form, feeling and fancy akin to those of the Creator of Nature, and to the principles and methods involved in his taste and invention. Hence sprang a whole category of arts, ranging up and down a scale like Jacob's ladder, connecting earth with heaven, in various proportions of (material or mental, terrestrial or celestial) elements and utilities involved. Thus began, so to speak, Minor and Major Arts; *i. e.*, those more materially utilitarian and technical, then those more phonetically expressive and spiritual. And there are those, between these two extremes, where, as at Bunyan's House-of-the-kind-Interpreter, man finds a middle Beulah Land, where angel "sons of God" may again "wed the daughters of men" in a *Vital Artist-Artisanship* combining heaven and earth, dream and reality, poetry and practicality.

Accordingly we mount by gradation from arts like engineering, practical chemistry and navigation (where man is concerned to devise forms for transmitting force with least resistance, rather than with most taste), up through the arts of agriculture, cooking, building, furniture, weaving, dressing and jewelry (where direct utility to the body, or the beauty of mere material, associates with utility to spirit and demands an artistic feeling); up to those that make dominant the esthetic influence (such as Pure Ceramics, Higher Architecture, Dramatic Gesture and The Dance); to finally those generated for the special expression of esthetic genius and principles (such as in Floriculture, Decoration, Sculpture, Painting, Music, Poetry and Eloquence), until we reach the very Art of Life itself!

AMONG the strictly formal arts—of architecture, sculpture and painting, to which the term of Art is too popularly confined—we note the same Three Primes reassert themselves, from primitive relations of force and form. Architecture is the most "squarely" rectangular, rigorous and structural, employing hardy lines and materials of support; while sculpture grows more plastic in substance, motives and movements—the ceramic arts spinning upon the potter's wheel (or circle). But painting becomes the greatest, lightest and most varied of all, as its comprehensive range is least embarrassed by material, and conveys not only optical presentations of its preceding sisters but wholly ideal conceptions and situations—by far the most elaborate and complex—after the symbol of the Star.

It was natural—in rigorous and more warlike times, when walls were for defense as much as shelter, and cities huddled under the protection of the most violent and combative leaders—that architecture should have outrivaled its sisters sculpture and painting, and should have emphasized those elements of design which most implied rigor and resistance. This we see, notably, in those countries and periods when Asiatic and Egyptian lords were swaying back and forth in ceaseless strain and were ravaging each other's land with sweeping devastations. As these were gradually overcome and put back before the higher enlightenment and genius of Greek civilization, plastic sculpture reached her most magnificent flights and culmination, far in advance of her sisters architecture and painting. But when the arrival of Christianity brought warmth and glow of heart to sublimate and kindle the colder intellect of classic thought, painting sprang forward with the most brilliant and most diversified inspirations, through every glowing gallery of castle and cathedral.

At first art sought the massive and awe-inspiring lines derived from abstract geometry, and

Canova, Sculp.

PERFECTED IDEAL OF MALE FORM

(Perseus and the Gorgon's Head)

upheaved them in basalt and granite by the ponderous toil of myriads. Then, out of kindlier porphyry and Pentelic marbles, grew the pure Greek dreams, in sculpture, of divine visitors walking on Parnassus and communing with heroes of uncommon mould and aspiration. Finally came the burst of divine hope and Christian rapture that "every man might be a hero" and the God-heart could suffer and descend to every table or task! So only the color palette, aflame with coruscating halos of light and portraying passions of self-sacrifice, could suffice to supply to man the realizations of his noblest ideals. Form alone had been beautiful before, but now it was form and spirit eternally united in a world's redemption and uplifted infinitely in concept and capacity by an immanent Deity in daily manhood.

In each step Liberty seems to have advanced, and with it the liberty of Art. When we painters start a picture we first wash thinly in the general atmosphere and sketch the conception, composition and outline; then develop form, and color, then detail and finish.

The great Artist of the heavens seems to have done so in the history of the race and of its art.

The Chaldeans seem to have commenced the picture with the simply stained wall and vague halos of commingled tones in flat but gorgeous tapestry. Assyria and Egypt took up mass and outline; Greece developed proportion and form; Italy developed color; and modern times seeks detail, finding inspiration not so much in vast or grand conceptions as in the incidents and idyls of *daily* life and landscape.

Old Babylon conceived a vague, undefined Deity, Baal (which simply signifies "lord"). Her art was, therefore, dreamy, unsubstantial and without relic save in the later Arab influence and modern Persian tapestry. Afterward, in Assyria, obedience seems transferred to a deified human tyrant who was at least a human being. Hence her art is essentially "regal" and occupied with royal exploits.

Next, Egypt passes it to a number of men—the priests—of whom the king is one. Hence her art is "sacerdotal" and canonized, remaining, like liberty, patiently enchained for centuries.

Then Greece passed it to the state (the individual still sacrificed to the general), and art, impressed into her service, becomes the "stately" expression of her ideals.

In Italy, liberty grows "municipal" amidst the rule of many cities, and art expands her wings wider—though still sorely manacled to dominant families, as Benvenuto Cellini describes where the Medici forbade him to leave Florence.

In France, Germany and England, liberty becomes parliamentary, though still retaining a monarch. So, though art still stays "courtly," she attains a fuller freedom and personal character than ever.

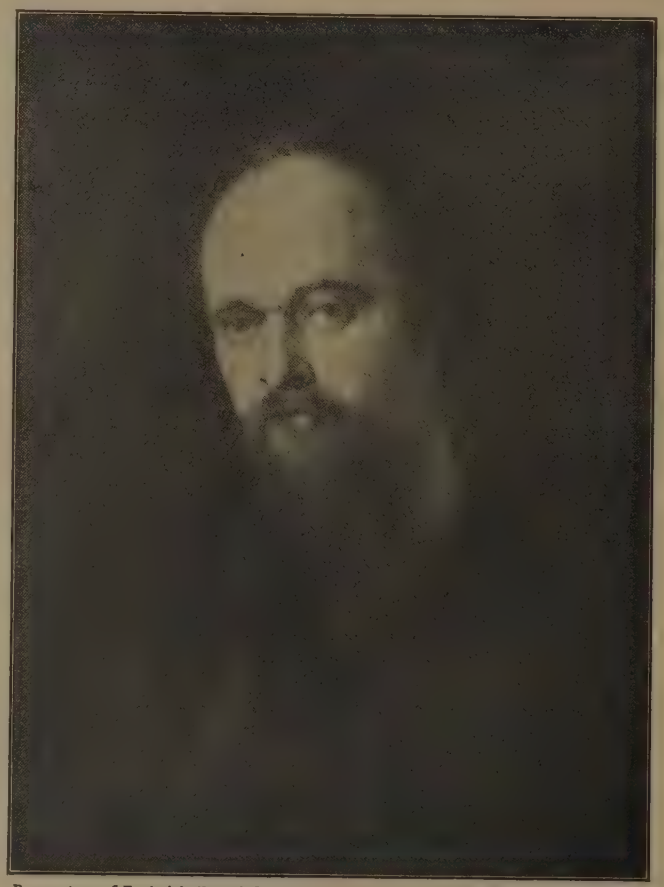
Finally, in America, we have the entire liberty of the individual and with it art is unpatronized, unprotected and "personal." She "paddles her own canoe."

THE ANCIENTS had that calm, far vision which should balance and temper our era of punctilios. They made haste slowly. First there was the honest struggle to be; then the proud comprehension of personality and mission; then the joyous conception and transmission of life to their next successors. Assyrian and Egyptian art was eminently masculine, and confined in architecture to rugged rectangles or stable pyramids. Greece started with her stern Doric capital which bore its weight with sturdy bluntness; then passed to the intelligent Ionic which inserts a comfortable cushion; finally she conceived the Corinthian (direct inspiration from Nature) which bears the triangular roof as a plant bears its flower or a bird bears the weight of its wings.

So Greek sculptors, early kindled by vague mists and monsters, first carved crude and muscular warriors; then glorified intellect and reason in the proud Minerva; then later under Corinthian influence adored Cytherea and Eros.

In Italian civilization there is far more feminine passion and feeling; hence the graceful circle with its modifications conveying a sense of movement, and Color with its glow, assert themselves more strongly in the mobility and elegance of acqueduct and arch, dome and amphitheater.

Still later, Christian Gothic combines circle with square, arch with triangle, in a devout upward movement as though holding them to heaven. So in art composition you will find that beauty is best balanced and agreeable when these elements and genders are appropriately wedded, the strong with the tender, the severe with the gentle, the straight with the curved, the letter with the spirit. Avoid excess in either, unless emphasis occasionally requires, as where Hindu earth-worship accented the *downward* movement; patient, protracted Egyptian life along earth's surface accented the *lateral* movement, with calm and gloom; Greece tried to proportion the severe terrestrial life better; and Orientals made it gay by dancing *upward* curves; but Christian faith combined the elements and carried the line *heavenward*. (See Chart XXXVIII–*b*.)



By courtesy of Frederick Keppel & Co. Frederick Hollyer, Photo.

DANTE GABRIEL ROSSETTI
(G. F. Watts, R.A., Pinx.)

We see that the consideration of dynamics or the mere tendencies and distributions of force (whether active or static, actual or only implied) become of highest importance in esthetic effects; and these were early felt and utilized with impressive power.

Every one is familiar with Nature's clever decorative suggestions of these in towering pines, combing breakers, flowing manes or tails of dashing steeds, bristling lions, etc. We have been delighted by brilliant Japanese designs caught from suggestions of running water, drifting clouds hurtling rain and hail, eddying leaves and flying fowl. (See page 196, Charts XVII. and XXXIV.)

And when we come to graceful spans of springing bridges, groined arches, or climbing turrets of cathedral towers, seeming to scale heaven's gates, we recognize the artistic value of implied motion in giving esthetic charm.

It is for this reason, that in drawing the human figure (as in Chart XXIV.), it is of highest importance to express fully and freely the general motions and tendencies of the figure and its members before developing forms and details. Especially should we remark the highly significant tendency of organic growths to develop expansively "*from Right, to Round, to Radiate*" relations, as in the *unfolding of a closed hand*, or in the spreading of a fan. (See Chart XIV–*a*.)

In the last great art, of painting, and in that Italian nationality where hitherto it is most triumphant, there have appeared, historically again, Three Supreme Leaders of genius personifying the same mysterious distinctions of primal tendency and inspiration, as well as bearing characteristic names in striking coincidence with the Three ARCHANGELS —types of Revelation, (*i. e.*, Michael, of militant offices; Raphael, of religious offices; and Gabriel, of civil offices).

These giant leaders were Michael Angelo, whose rigorous genius mounts preëminent for

titanic energy, for structural severity of form and for grandeur of lines, ("Moses the Law-giver" being his typical carving; "The Last Judgment" being his typical painting).

Next came Raphael Sanzio, the gentle, amiable and beloved disciple with religious feeling and heart, feminine in type and temperament, and prolific in holy Madonnas curving their plastic forms within canvases of curvilineal margins.

Thirdly came Gabriel Rossetti, poet-painter, of whom the critic Colvin says: "Though born in the midst of the nineteenth century he belonged by nature to the middle ages, when color and life were most vivid and varied, and when sense of supernatural agencies was most alive." An Italian born out of his age and country to convey to our expanding Saxon civilization the lesson and inspiration of the Great Renaissance. By the creation of a new "Art Brotherhood," along *vital* lines and *organic* principles he summoned the slumbering genius of a new evolution from the springs of national and personal resource, into all the radiate intricacies and possibilities of modern poetry, beauty and industry *combined*. In him not only Great Britain took her highest and purest art impulse out of her own Arthurian legends and poets (through the zeal of his strong young allies Morris, Watts, Millais, Madoc Brown, Burne-Jones, etc.), but he lighted the torch of genius for the keenest and farthest-sighted poet-artists and artist-artisans of America.

JEAN FRANÇOIS MILLET
(From a study by himself)

His friend Hall Caine tells us that early in life Rossetti was deeply impressed by our Edgar Allan Poe's literary picture—in The Raven—of an earthly soul seeking its heavenly counterpart. Thereupon Rossetti determined to write his own poem of The Blessed Damozel to portray the Heavenly Spirit looking downward for its terrestrial partner. In this symbolic sense, the two halves of a great thought (of ideal and material components), as well as two halves of our Saxon civilization, may be harmoniously combining to effect a great destiny—as esthetic as it is ethical and political. The old world poetry should bring forth a wealth of spiritual experience and inspiration, and the new world's energy, virility and resource must recast and reïncorporate the *best* into millions of democratic realizations.

Says one eminent critic: "Rossetti's reputation long stood high, yet few could explain the secret. Friends, disciples, admirers spoke of the master with reverent awe. It is impossible not to respect a man who, in these days of insincerity, *believes in something heartily and continues to believe in it and himself all life long*. Perhaps more than respect is due the man who resolutely held aloof from a world which fancies itself law-giver to every man in or out of it, as did Gabriel Rossetti." Beautifully and tenderly Rossetti expounds the true ambition of modern life as it should be, alike in

art, religion or society. "Plainly to think even a *little* thought—to express it in *natural* words *native* to the speaker—to paint even an insignificant object as it *essentially is*—to persevere in looking at truth and Nature." Is not this the "angel of civil things," the modern evangel of the simplest life of the humblest soul?

Jean François Millet, in France, had lived these truths mutely and pathetically on the farm at Fontainebleau. Gabriel Rossetti formulated the principles and transmitted them. The words of Burne-Jones himself, speaking of his master, best summarizes for us this *sacra flamma:* "One day Morris and I discovered that we were face to face with something new and wonderful. It was the opening of the First Seal for each of us. It was Rossetti-the-Poet who was so new and strange a painter, and the painter who wrote poetry with so rare and strange a note, who appealed to us the most. But we felt the charm, the originality, the novel creative spirit of each of these men (Rossetti, Millais, Hunt), and perhaps more than all the spirit common to them all—in them, but yet beyond them—the wonderful, fresh, recreative SPIRIT OF A NEW DAY!"

THIS must suffice us as the broad, simple and concise survey of the historic art advance of humanity up to to-day, with the comprehensive foundations and animating elements that seem to have compelled all natural or artistic construction. Each soul must study it in detail in the museums of life. It is a subject of infinite fascination, of vital importance and practical advantage to every intelligent and spiritual being, but most essentially must its essence be understood by the professional student of Art, for whose especial help in class courses we add a series of systematic Chart Lessons or Lecture Outlines, richly illustrated in sequence, that the mind may get quick and clear grasp of the Unity of the whole, as well as the Harmony of the parts, and may be stimulated personally to fill in the interstices of thought and investigation. For the subject is intentionally left suggestive and vital, not narrowly "set" nor final. These lessons we will cluster together appropriately for the closing half of the book. *The material elements are not so important as the spiritual.* Michael Angelo was the same grand creative spirit when carving his statues, painting his frescoes, writing his poems or erecting his cathedral domes and Florentine fortifications.

WE ALSO give at this point a full-page outline of what, for the artist, should be special Subjects of Study and observation, and classify them in the order of their importance and of their intellectual relations—though for consistency with Nature's sequences in growth of mind (individual and racial) we are trying to unfold our theme logically from roots to fruits, rather than from fruits to roots, remembering the order of St. Paul: "That was not first which is spiritual, but that which is natural; and afterward that which is spiritual."

Looking over this chart of subjects the reader notices that we give supreme importance to the Spirit or Sentiment in which Nature is found to act or to create. We do this because in the study of all civilization, motive is found supreme over method. In the long run of life, Heart counts for more than Head; Feeling more than Intellect. "Keep thy *heart* with all diligence;" says Holy Writ, "for out of it are the issues of life"!

We find that Nature works ever with that sense of originality that can only come from infinite freedom and infinite will. There is no rest nor sense of fatigue in Nature. However far we follow her back, ever we find Infinite Being and Becoming, ever "fresh improvisation," as Emerson calls it, ever fresh and infinite adjustment. Yet at every stage or turn of events the Great Artist takes time enough to perfect the Ideal, and even the individuality of that hour. No leaf nor flower is exactly and absolutely like another, as no child born but has his personal characteristics and forms. What we do discover of unity is in the plan and principles, not in the individual personalities; and this seems intentionally to convey to us ideas of soul-likeness to God—upon the side of one-ness and isolation, and in powers of ideality and creation.

1st SPIRIT of Nature - - (IN WHICH SHE ACTS.)

2d Principles of Nature - - (WHICH SHE MANIFESTS.)

3d Laws of Nature - - (BY WHICH SHE LIMITS HER ESTHETIC ACTION.)

4th Methods of Nature - - (WHICH SHE EMPLOYS IN HER ESTHETIC ACTION.)

AS

ORIGINALITY.
INDIVIDUALITY.
Freshness-in-Familiarity.
Simplicity-in-Complexity.
Variety in Equipoise and Unity.
Spirituality, Ideality, Poetry.
Mystery, Suggestiveness, Promise.
Aspiration, Inspiration, Self-Revelation.

Vitality, Energy, Daring, Sublimity.

Restfulness, Stability, Serenity, Self-Respect.
Care, Temperance, Freedom-Wise.
Patience, Endurance, Ruggedness, Discipline.
Truth, Frankness, Openness.
Scope, Universality, Generosity, Richness.
Fullness, Completeness, Finish.
Taste, Refinement, Purity.
Delicacy, Grace, Charm.

Joy, Play, Sparkle, Brilliancy.
Felicity, Facility, Fertility, Variety.
Immortality, Goodwill, Furtherance.
Sympathy, Beauty, Perfection.

PER-CEPTION. IN-SIGHT.

Purpose, Forethought, Plan Arrangement.
Conservation, Transmission, Progression.
Unity, Order, Regularity.
Equality, Equipoise or Balance.
Dominance, Subordination, Coördination.
Selection, Rejection, Control.
Emphasis, Proportion, Symmetry.
Gradation, Crescendo, Cadence.
Harmony, Coöperation, Accommodation.
Discretion, Propriety, Fitness.
Consistency. Adaptation.
Conformity. Flexibility.
Congruity. Sensitiveness.
Reasonableness, Naturalness, Wholesomeness.
Wisdom, Utility, Efficiency, Economy.
Sincerity, Genuineness, Honesty.
Clarity, Decision, Definiteness.
Embellishment, Fascination.
Fruition, Achievement.
Sustained Pleasure.

LIMITATION AND CONDITION

in

SPACE.
Length.
Breadth.
Thickness.

TIME.
Sequence.

Energy—Volition.
Force { Static. Dynamic.
Tendency { Action and Reaction.
Pulsation—Rhythm.
Motion—Centri- { fugal. petal.
Im- Re- } pulsion.

Opposition.
Tension.
Contrast.
Competition.
Equilibrium.
Coöperation.
Coördination.
Organization.
Growth.
Persistence.
Reproduction.
Reconstruction.

Directness.
Angularity.
Repetition.
Continuity.
Extension.
Progression.
Procession.
Revolution.
Evolution.
Expansion.
Dispersion.

Straight.
Oblique.
Rectangular.
Parallel.
Curved.
Undulate.
Circular.
Cylindric.
Conic.
Ovate.
Elliptical.
Parabolic.
Hyperbolic.
Spiral.
Tangential.
Radial, etc.

TRANSFORMATION { In-tegration. Dis-integration. Re-integration.

FORMULÆ—FORM.

Structure—Function.
System—Skill.

RELATION—SCALE-RATIO.

Numeric.
Quantitative.
Metric, Geometric.
Distributive.
Formal.
Dynamic.
Structural.
Functional.
Vital.
Intellectual.
Emotional.

5th Spirit of History. ITS LIMITATIONS. METHODS AND STYLES. CHARACTER.

AS

Repetition.
Parallelism.
Series { Lineal. Plane.
Reflection.
Contrast.
Alternation.
Counterchange.
Juncture.
Overlapping.
Interlacing.
Linking, Looping.
Cabeling.
Strapping.
Interpenetration.
Fusion, etc.

Mechanicalizing.
Conventionalizing.
Literalizing.
Individualizing.
Generalizing.
Symbolizing.
Idealizing.
Trans- { scribing. lating. muting.

ITS MEDIA.
ITS SUGGESTIVENESS.

6th Spirit of the Present. ITS LIMITATIONS, METHODS, STYLES, CHARACTER.
ITS MEDIA.
ITS SUGGESTIVENESS.

7th Spirit of Special Technical Media. CHARACTER. LIMITATIONS. PROCESSES.
SUGGESTIVENESS—
LAWS OF LIGHT AND COLOR.
LIMITATIONS—OPTICAL.

[See page 192]

CONTRASTED TENDENCIES, BY PLAY OF LINE

In this great sense the sublimest gift the Father gives his child is the supreme consciousness of its individual grandeur, of being essentially like Him by gift of inheritance, but free to be unlike Him by choice and by the use or neglect of His vital methods. For this reason man is not automatic. Hence all the works of God's finger give us the peculiar compound flavor of Freshness-in-Familiarity; Simplicity-in-Complexity; Variety sustained by Equipoise and Unity; which supplies the two great needs of life, viz., conservative strength for repose, with sufficient play, plasticity and flexibility for progressive growth.

All life seems so constituted and balanced that Unity (as the root of each soul's personality and self-respect) is preserved forever, and is more and more to be perfected by life experience, however much development compels it to reach Duality, by Sex, and Multiplicity by social Coörganization and Creativeness. This quality, therefore, of Originality and Individuality, seems never likely to be sacrificed by the soul at any stage of its infinite progression, and it becomes, in art, an immediate element of power and preciousness for style.

This clear conviction of the permanence of individuality becomes fortified and confirmed, on noticing that, before Deity created the personal constancy of man, he gave to every precious or interesting thing about man, a similar inner constancy of ideal upon every stage of its evolution. This it somehow knows how to guard forever, and to value. We notice this from the humble crystal that, returning from liquid solution, seeks again its own inner structure and special form; up to the fairest gem, bird, beast, flower, fruit or human frame. Throughout all we see the definite Ideal working its way onward, for *special* purport and expression; and this is ever the essence of what we term poetry or art.

STILL, however much heaven grants us, she holds back enough to make us *desire more*. The element of Mystery is never absent. Always Suggestiveness, always Promise, never a sense of exhaustion! Always, in regarding Nature, we are conscious of the elements of Aspiration, Inspiration, Self-expression; a sense of boundless Vitality, unwearied in Energy, infinite in Daring, measureless in Sublimity.

This side of Nature was profoundly felt in the earliest ages by the oldest artists and poets. Homer, Ossian, the Norse sagas, the Vedic hymns, etc., teem with it.

If we grow dizzy by beetling crags and portentous mountains, that in terror and sublimity heave cyclopean shoulders to uphold ever-shifting skies, still they rest forever on calm, stern, changeless foundations beneath. The storm-tossed billows of mighty ocean ever come to repose in the level line of the distant horizon. The tumultuous clouds ever open, early or late, into the serene, untroubled azure of heaven. Ever the mysterious Duality of Contrast between sleep and waking; between rest and progress; aspiration, activity, attainment, ever based on stability, serenity, self-respect. Look into any product or act of Nature and you will find her ever thoughtful. The grandest cliff is yet made of delicate crystals, the boldest lion is sprung to life by the finest nerves. Ever a sense of marvelous Care, perfect Temperance, Freedom-wise. The care is not that of anxiety or doubt,—(Nature is too sure of her purposes and processes for that), but it is rather of vast unfretted Patience, unwearing Endurance, rugged Self-discipline in obedience to her own laws. "When you begin to think of things rightly," says Ruskin, "ideas of smallness and largeness pass away—nothing is ever done beautifully which is done in rivalry, or nobly which is done in pride."

Over every great step of upward evolution in which the rocky records of ages retain evidence of extinct species passing up to higher, we see Time's finger carve a sublime superscription akin to that over the heroes of Thermopylæ, "Stranger, go tell the ages that we died obedient to Law!"

Again, the spirit of Nature is never tricky, never spurious, never disingenuous. She will, indeed, often surprise us,—but we will find the surprise came from our ignorance. Look up the law behind and we will find it constant and serene.

If we could go far enough into law, and wait upon each dynamic step, we should find this mathematical constancy present in the exact equations of what seems to us the unforeseen or cataclysmic. To the gods there is no such thing as accident, and no such silliness as luck. To man, indeed, there is plenty of what he may call "providence," but it is the providence of Cosmic Law, and the kindness of Spiritual Opportunity and divine Gentleness.

TRUTH, Frankness, Openness, are really present to the spirit of Nature, behind the apparent veil of her mystery. "All things are naked and opened unto the eyes of him with whom we have to do." But it is the coyness of a true lover, the play of a Mother hiding from her children.

"Like as a father [or mother] pitieth his children, so the Lord pitieth," says his Word; and how touching are those hide-and-seek lines where he lovingly explains this secret motive: "He hath made of one blood all nations of men, . . . and hath determined . . . the bounds of their habitation [limits of environing life]; that they should seek the Lord, if haply they might feel after him, and find him, though he be not far from every one of us." "Seek, and ye shall find; knock, and it shall be opened unto you." Then, when he does open, what Scope, Universality, Richness he displays! Is there any end to our marvel? Any limit to our inquiry?

There are realms, indeed, we cannot yet reach, Arctic poles of truth we are not yet allowed to attain. On many sides Heaven draws a line to human ambition or to intellectual pride, and utters those words to Job: "Hitherto shalt thou come, but no further: and here shall thy proud waves be stayed."

But still, within those limits, what endless sources of delightful inquiry and appreciation! Within the bounds of one spring morning's walk where could man find the end of his curious and delighted investigation? And when man stoops to study and enjoy the humblest of all the wayside flowers, what sense of perfect Fullness, Completeness, Finish is breathed from every miraculous petal! What Taste, Refinement, Purity—what Delicacy, Grace and Charm!

Yet with all this wealth of wonder it would seem that God's Spirit is thoughtful of the human capacity and constitution (physical and spiritual) for which these marvels are meant. "He knoweth our frame [our physical structure]; he remembereth that we are dust" (atoms held together by his Spirit). So that he does not overwhelm us wholly and totally by his power and splendor. Sun, moon and stars are tempered to our sight, we are put at such relative distance as not to be frightened, though we might easily be appalled by a little more of their proximity. Had the beasts of the field been a little stronger, how easily man might have been overwhelmed. Had they been a little smaller, how easily they had been useless.

WHAT wisdom of Measure and justness of Proportion we note, throughout the whole range of man's setting. It is in order to *stimulate his reasonable delight and ambition* without overwhelming his capacity or warping his rational conceptions. The form and fascination of his environment is so dexterously adjusted, by this kind and all-wise Parent, as to lead out man's spiritual inquiry and develop his poetic and artistic sense. Every object on earth is set to man's special Scale as a unit of measure (up or down), just as St. John beheld the new heaven and new earth to be "measured . . . according to the measure of A Man"—a perfected, all-rounded, ideal man.

Hence there is always in our true appreciation of Nature's wealth of beauty and confiding love, a sense of her condescension and familiarity with her offspring, inviting their child-like delight. Her spirit of Joy, Play, Sparkle, Brilliancy, veritably fascinate and entertain us as children. Indeed, except as we "become as children," we cannot enter the All-Mother's heaven.

What Felicity, Facility, Fertility, Variety this mighty Kindergartner employs for our delight and education! In speaking of this charm, Ruskin says: "What delights you in any picture of Angelico's is the exquisite variety and brightness

TRIAD OF GODDESSES (FROM THE PARTHENON)

of ornamental work—which is but the final result of the labor and thought of millions of artists of all nations, from earliest Egyptian potters downward—Greeks, Byzantines, Hindus, Arabs, Gauls and Northmen. Angelico takes his share of this inheritance and applies it in the tenderest way, but it exists everywhere. Much also depends on Repose and Grace of gesture in floating, flying, dancing groups, long developed by others, the real root of which is the Beautiful Dancing of Florentine maidens."

If the sea occasionally terrifies us with storm it is because we have forgotten her days of splendor that flooded her with sunshine, flecked her with happy ships successfully bearing home her freight, or the mellifluous melodies that sang us to sleep by her rippled shores. The school-room is, so to speak, "called to order" for awhile, and we are disciplined a little for our good. And, if we have but eyes to see and ears to hear, we shall behold on all sides perpetual and perpetuating proofs of Immortality, Good-will, Furtherance; the spirit of Sympathy, Beauty, Perfection. These are simply some of the more obvious and valuable attributes of Nature's character, to the soul which goes to her with confidence and love to learn. And we point them out merely to start the thoughtful mind upon the path of inquiry. This book is intended not so much to enter and exhaust that boundless realm of Feeling that should be the personal possession of every spontaneous heart (in wholesome touch with God's own Heart, or even in touch with the already rich treasures of poetic and artistic record), but it is rather an intellectual effort to enlighten the mind of the reader to the comprehension and glorious use of his own faculties and the artistic possibilities about him, and especially to put him in possession of the keys to true artistic and poetic investigation or composition.

AND NOW let us stop a moment to take account of those special Faculties with which the Creator has endowed us, in order that we might be enabled to look into his Spirit as poets, and comprehend his work as artists, before we take up each definite artistic lesson.

What are we called upon to develop, within ourselves and our friends, that we and they, together, may become true artists?

We intimated above how man is made to be his own telescope through which to behold, comprehend and magnify the nature of God, and the God of Nature. For man is compelled to behold his Creator through the natural and human eyes his Creator gave him. "Water rises only to the level of its source," and as man grows greater himself, his views of Nature and of God constantly enlarge and clarify. In knowing himself better he knows Deity better.

We explained how, in his own body, man has found the basal numeric principles of life strongly emphasized—in Unity, Balance and Variety. But let us look further.

Take the human hand, for instance. Look into its forms and arrangements, as the accompanying illustration shows. We see again that there is here a careful reiteration of the same Tri-Unity. The central finger of the hand is the longest and tallest, to keep the middle of the hand in line with the middle of the arm and to emphasize the law of its *unity*. Next it is flanked and balanced by *two* fingers upon each side of it, and these are *graded* up to it, so as to make a rise of *three* regular steps, upon either side; indeed a beautifully symmetrical *rise and fall* or "crescendo-diminuendo," by which the eye gradually ascends to the highest finger-tip at the center of the hand, and then descends gradually down the other side. This is a strictly musical movement, of supreme beauty in all art composition, and will be illustrated and explained in its special chapter. It was known to the great Greek epoch as the law of the Anthemion and is everywhere present in nature and art as a supreme case of Harmonic Progressive Proportioning. It teaches us, as it were, how to ascend and descend *gradually and*

beautifully, to and from the capping of an artistic climax.

Notice, also, that four of the fingers carefully repeat this same Tri-Unity, by dividing their conical columns at *three* points for joints; and that, then, Nature cleverly admits a slight "Variety" and change in the length of thumb and in the number of its joints, in order that the sense of mechanical regularity should not be too strongly evidenced, lest the art effect be lowered—for she insists on "the spirit rather than the letter" of law, that man may recognize the propriety of catching that spirit modestly and wisely, rather than presuming literally to equal Nature's executive perfection. Man can never, for instance, equal with his palette the glory of God's sunsets, but he can *suggest* their splendor and revive their rapturous harmonies.

So, in looking for man's art faculties, we find them coming into the same Three essential categories of

Heart, Mind, Body; or
Emotional, Intellectual, Physical
departments.

The First inspires;
The Second controls;
The Third adapts.

From his emotional realm of being man draws his finest spirituality, ideality, sentiment, sympathy, taste, refinement and poetry; his inner faculty of vision, and inspiration; his sensitive touch with the inner and over worlds, so that he feels their sacred charm and appreciates their revelations of grace and beauty. In these faculties reside preëminently that which constitutes his supreme originality and individuality, for it is his special affinities with, and messages from, the spirit world, that give him his prime qualities of fascination or positive genius—in the estimate of his fellow-men and of history.

Upon the question of man's genius, Lamartine has a passage of much relevancy and beauty. He says: "Providence conceals itself in the details of human affairs but is unveiled in the generalities of history. No sensible person has ever denied that the great events which mark the history of man are connected and linked by an invisible chain supported by the Almighty Hand, to give them Unity of design and plan. How can He be blind who has given sight? How can He who has endowed his work with thought be without thought? The ancients gave to this occult, absolute, irresistible influence of God over human affairs the name of Destiny or Fate, but moderns call it Providence (a more intelligent, religious, and affectionate name).

"In studying the history of humanity it is impossible not to discover the permanent action of Providence concurrent with and controlling the free action of men. This general, collective movement is not incompatible with freedom of will, which alone constitutes the morality of individuals and nations. It seems to let them move, act and go astray, with complete liberty of intention and choice of good or evil (in a certain sphere of action), and with fixed logical sequence of penalty or reward, according to *intention;* but reserves to itself the guidance of the *general* results of individual or national acts. It appears to reserve them, independently of us, for divine ends, with which we are unacquainted, and of which it allows us only a glimpse.

"The hidden but divine instrument of this Providence, when it thinks fit to make use of men to accomplish part of its plans, is 'inspiration.' Inspiration is indeed a human mystery for which it is difficult to find a cause in man himself. It seems to come from a higher and more distant source. Hence has arisen a name—mysterious, also, and not well defined in any language—called Genius. Providence causes a man of genius to be born. Genius is a gift, it is not acquired by labor, nor is it even obtained by virtue. It exists, or not, without its possessor being able to explain how he came to possess it. Inspiration is to genius what the magnet is to steel; it attracts it, irrespectively of all knowledge or will, toward something unknown, as to its 'pole.' Genius follows the inspiration by which it is attracted, and an ideal or actual world is discovered."

This faculty often expands (in the field and practice of art) into something of a supernatural

instinct of the soul for those special elements which most befit and apply, in any special artistic rôle—be it in music, color, form, ornamental embellishment, or the power to interpret beautiful conditions when previously crystallized by Nature or man. It can no better be defined, perhaps, than by the very simile of the magnet which intuitively swings into harmony with such magnetic currents as head to the pole-star of Cosmic Truth.

But the author differs with Lamartine as to the law of its origins and limitations. For it is known that crude iron, not magnetized, has the marvelous property of becoming magnetized, and having all its particles *repolarized when once set in the great magnetic current* of our globe, and allowed time for that influence to act upon it. Then the poor, crude metal not only *acquires the mystic power of a true magnet* and guides our ships safely to their ports over stormy seas, but has also the *power of lying up beside other crude iron and polarizing it into like sensitiveness with its own.*

This strange and glorious fact seems also to appertain, in a certain measure, to the spiritual quality of true genius. It often seems absent at first in a soul, but gradually to appear, by a sort of deep and steady repolarization, according as vast influences from Heaven and Nature flow in. And it also, at times, evinces the mystic property of transmitting its sacred power and vital spark, by contact and communication with the sensitive soul that welcomes it—as the mantle of Elijah descending on Elisha with its powers symbolized. These emotional faculties are open to inspiration and cultivation from every wind or compass-point of universal life.

But there are Intellectual Faculties, as well, which the artist is bound to regard and to develop. The powers of Observation, Concentration of interest and attention; the powers of Analysis, Insight and Discernment, which penetrates and recognizes essential elements and principles at work; the power of Comparison and Judgment between these; and the discretionary choice or Selection of elements for higher appreciation and adaptation; the power or faculty for Form (as such), involving Form-Memory and Revisualization (the fastening upon the memory the essentials of form, and the faculty of reviving or ideally inventing and arranging these or kindred forms).

This last is an intellectual power of utmost importance to strengthen. What careful mental measuring, preferring and eliminating is required by a fine art judgment, simplifying, fortifying, and emphasizing those noblest elements perceived and selected. And what discernment and discretion in preferring the *most appropriate and most harmonious!*

This is equally true, in perhaps a more purely physical sense, of the sensitiveness of eye and ear to the refinements, delicacies and harmonies of color and sound, and the shading and grading of light and tone. How physically necessary, also, it becomes in the great field of applied arts of Design, to grow thoroughly and *physically* acquainted with the material elements, and with manufacturing processes and limitations of all special media, in order that the memory and taste together may bear these in mind and so attain the best material applications and realizations for our faculties and feelings.

For, as said before, matter is so much *alive*, so full of qualities due to *resident* and universal Spirit, that we feel conscious of certain inherent elements of beauty and esthetic sentiment in the substance itself, before or after man has added to it his personality. The radiant diamond is itself apart from its setting. The translucent glass, opalescent shell, vibrant metals, resonant woods; indeed all atomic character, whether crystalline or fibrous, rough or smooth, light or heavy, friable or tough, plastic, ductile, malleable, fusible, or other, present *inherent* or acquired charms which speak to our artistic sensibilities with profoundest (or we may say primordial) suggestiveness and sentiment from the Author of all Beauty, Poetry, and Taste.

Rossetti, Pinx.

"THE BELOVED" REVEALED TO DANTE

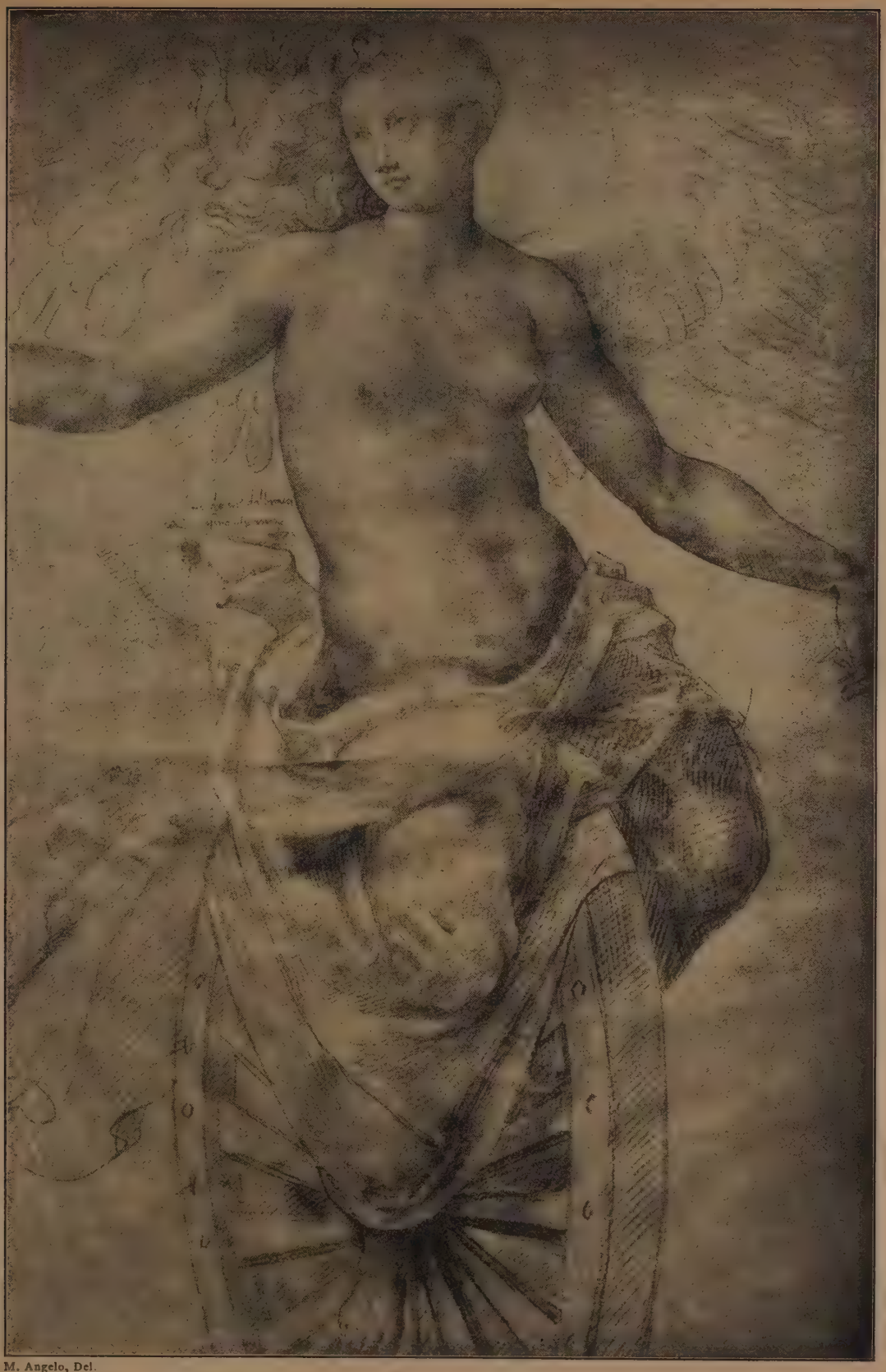
CHAPTER IX.

NATURE'S IDYLL

"AND THERE appeared . . . in Heaven, a Woman [Love] clothed with the Sun, and the Moon under her feet, and upon her head a crown of . . . stars: . . . and the *Earth helped* the Woman."—*Vision of St. John.*

A young Love
in the New Moon
by J.W. Stimson

"TRUE ART is made noble and religious by the mind producing it. For those who feel it, nothing makes the soul so religious and pure as the endeavor to create something perfect; for God is perfection and whoever strives after it, is striving after something divine."—*Michael Angelo.*

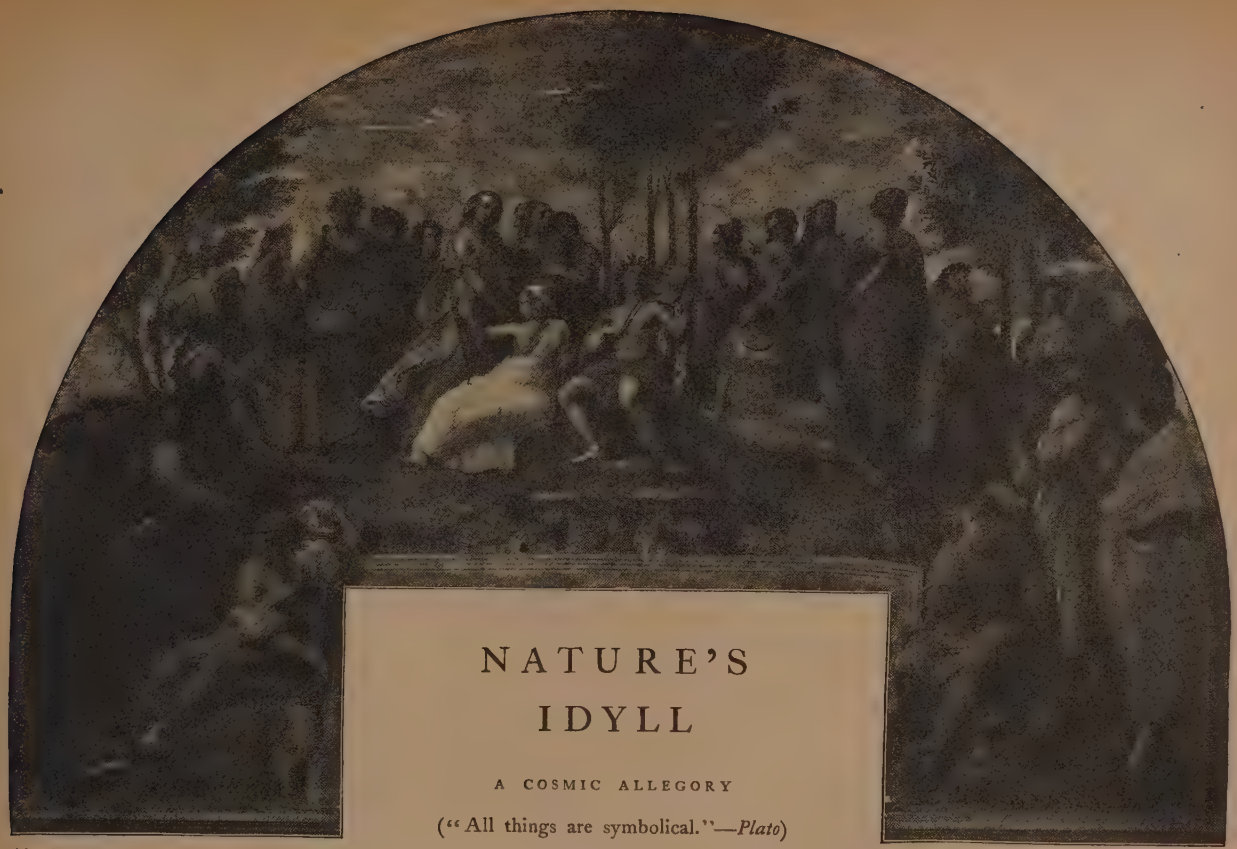


M. Angelo, Del.

LOVE BALANCING THE WHEEL OF FORTUNE

"THE POETRY of earth is never dead:
When all the birds are faint in the hot sun,
And hide in cooling trees, a voice will run
From hedge to hedge about the new-mown mead.

—*John Keats.*



"APOLLO AND THE MUSES"

VATICAN FRESCO

NATURE'S IDYLL

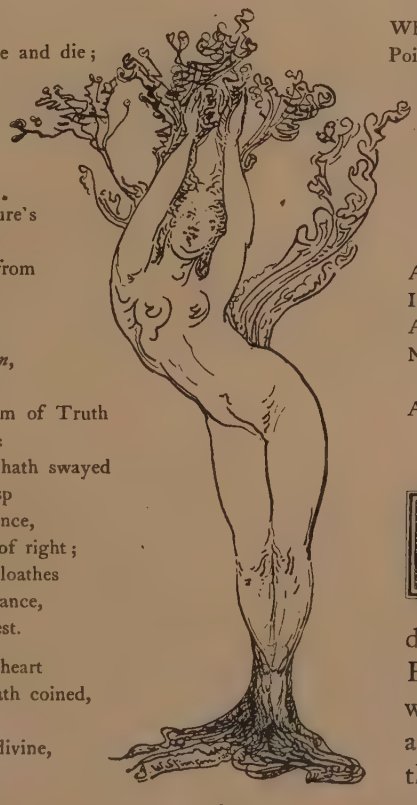
A COSMIC ALLEGORY

("All things are symbolical."—*Plato*)

"'I AM the Dryad of this tree,
And with it I am doomed to live and die;
The rain and sunshine are my caterers,
Nor have I other bliss than simple life. . . .
We spirits only show to gentle eyes,
We ever ask an undivided love,
And he who scorns the least of Nature's works
Is henceforth exiled and shut out from all.' . . .

God sends his teachers unto every age,
To every clime, and every race of men,
With revelations fitted to their growth
And shape of mind, nor gives the realm of Truth
Into the selfish rule of one sole race:
Therefore each form of worship that hath swayed
The life of man, and given it to grasp
The master-key of knowledge, Reverence,
Infolds some germs of goodness and of right;
Else never had the eager soul, which loathes
The slothful down of pampered ignorance,
Found in it even a moment's fitful rest.

There is an instinct in the human heart
Which makes that all the fables it hath coined,
To justify the reign of its belief
And strengthen it by Beauty's right divine,
Veil in their *inner cells* a mystic gift,



Which, like the hazel twig, in faithful hands,
Points surely to the *hidden springs* of truth.
For, as in Nature naught is made in vain,
But all things have within their hull of use
A wisdom and a meaning which may speak
Of spiritual secrets to the ear
Of spirit; so, in whatsoe'er the heart
Hath fashioned for a solace to itself,
To make its inspirations suit its creed,
And from the niggard hands of falsehood wring
Its needful food of truth, there ever is
A sympathy with Nature, which reveals,
Not less than her own works, pure gleams of light
And earnest parables of inward lore."

—*James Russell Lowell.*

IN THE old mythology of Greece, as in many another sweet and poetic intuition of truth coming down to us from early days, "Father Heaven" was said to have stooped to wed our common "Mother Earth," and from their happy union sprang the myriads of Life's children that

now nestle to her bosom and that look to her for food.

The serene intelligence and infinite reason of the Father still broods over his children, but to our Mother Earth (from whose vitals we come, whose breasts we nurse, and to whose peaceful bosom we return for rest), is intrusted the peculiar "motherly" duty of educating and training the children she has begotten him.

This task, through countless ages, she has with motherly patience and persistence, been industriously accomplishing. True, from time to time, the Eternal Father (busily concerned with sun and star, planet and nebulæ, building the strong foundations of the house), has returned to visit his little family, and to illumine it with his miraculous and mysterious presence. But chiefly, through the cycles, he seems to have intrusted to Mother Earth the interior economy of the house, to gradually perfect and complete the plan he had both wisely and divinely conceived.

Dürer, Del.

STUDY OF AN OLD MAN

At this early hour of the twentieth century, the conviction is growing, upon our foremost and sincerest scientists, that she has slowly and serenely carried out his plans with true wifely and motherly fidelity. That though there have been family disorders—from children's quarrels, greediness at table, youthful ignorance, ill temper and intolerance—yet she has laboriously and lovingly educated them; trained and restrained them; occasionally applied the maternal slipper; teaching them at last the economy of mutual forbearance, respect for the All-Father's wishes, and especially confidence in both of their loves; till one by one the children are falling into line, with broom and spade, to coöperate in the common house and to render it tenantable, happy and beautiful for all.

This last but chiefest lesson she seems to be anxious to have us learn (and it is becoming gradually but generally recognized), that not alone is the Father's work founded on Truth, and the Mother's on Love, but the common product of their combined efforts (in celestial orbit or terrestrial evolution) is Beauty, alike as a principle, a concomitant, and a resultant. So that every child from oldest to youngest, humblest to highest, is responsible, according to the stage and measure of its attainment, for the beauty of that stage, and for the ultimate beauty of the whole.

It is a great pleasure to any genuine son or daughter of Mother Nature, to turn through the pages of her beautiful diary and to note some of the principles she has jotted down along the road for her own domestic economy and for the guidance of her offspring; some of the rules, as it were, on which she and the Father seem to have agreed for the attainment of this Universal Beauty. She has scattered these sibylline leaves like those of her forests, and he who runs might read—though oftener we trample them under foot. Some seem particularly luminous, suggestive and practical. For instance, in

GRACE IN RHYTHMIC MOVEMENT

a delicate preface (intended, I presume, for her daughters) she casually remarks that she was at first attracted to our Father by the great directness and intensity of his suit, by his great brilliancy and color, by the supreme power of his personality, and by a certain self-centered dignity and unity of purpose. "Henceforth," she writes down, "for me, straight lines, strong rectangles, luminous colors, vivid Individuality, Unity, Centrality, latent Potentiality, and a certain Directness and conservative Simplicity are always elements in male beauty."

While *he* adds as a personal foot-note, that so far as he was concerned, he was won to her by her fair, round cheeks, her girlish Grace and Lightness, as she wove about him the meshes of her fascinating dance, with the crescent moon scintillating as her bosom's brooch. That as womankind was ever variable, emotional and graceful, henceforth for him the circle, oval, ellipse, volute and spiral, should be elements of feminine beauty —in shell or flower, tendril or maiden.

In the happy halo of their honeymoon, I see they have set down Radiation as a cardinal principle agreed upon by them both, and, soon after the first kiss, Tangency was added, with Repetition and Reflection, as they gazed into each other's eyes. Then, as twin souls having but a single thought, and with all life currents setting in the same direction, Parallelism became prominent, with Balance and graceful Alternation.

So mutually considerate and respectful were our first parents, at this hour, that I find they agreed to indissolubly associate their tastes and thoughts; and Harmony was accorded a prominent place in their canon of beauty. Individuality and Personality became subordinate to Coöperation and Correlation; while mutual deference decreed that first one and then the other should be represented in the cosmogony of life by that "Wave-line of Beauty," combining straight and curved, spondee and dactyl, diminuendo and crescendo, to which the very music of the spheres became set, the tides of the sea and the pulses of the heart. So that now not only shall Night-and-Day repeat it with rhythmic Interchange and courteous Alternation, but Statics-and-Dynamics among physical laws, Conservatism-and-Progress among social laws, and finally Repose-and-Motion among esthetic laws shall reëcho the divine Ideal. Henceforth the heavenly choirs themselves "keep time," and the marching hosts of years "keep step" to the rise and fall of the Master's beat, as, with just balance, the Fates weigh out the equipoise and fairly emphasize first one and then the other element. Over the gateway (in the German fashion) they have carved: "Strength and Beauty shall be in his Sanctuary."

And now I notice with peculiar pleasure, that as the warmth of early affection crystallized into the calm duties of house-building and housekeeping, and as the good Mother's April tears and the Father's midsummer toils were lightened by bursts of matrimonial rapture, the principles of Propriety began to dawn upon them, and especially "Fitness and Apropos" was written down in their book with many underscores.

It was just about this time, I notice, that it seems to have struck Mother that, in the heavy outside work of laying the foundation stones of the house and in guiding the builders who framed the cellar or stored the coal, she might fluster Father and get in his way. So she very fitly decided to give him a fair field with his chemics and hydraulics, and (save for a few intervals of feminine vacillation and emotion, when she twisted the marble veins and undulated the hills) he seems to have worked along with great soberness and steadiness in straight lines and parallels, getting all the Beauty he could out of level strata, rectilineal crystals, diamonds, snowflakes and minerals.

Meanwhile *she* retires to her rocking-chair, taking with her one of those very straight needles he had fixed to his straight pines, and she sits preparing for him a green carpet woven of tangled grasses. She works out some very pretty lace curtains, in gracefully crocheted fern-patterns, till at last it comes her turn to have full sway with that eminently feminine element, the mobile, prolific sea. Here she evidently enjoys herself fully, and, in a young wifely spirit of emulation

and prodigality, fills it with teeming, soft, fanciful and graceful life; floating jelly-fish, waving sea-weed, winding fishes, that with woman witchery she decorates by anticipation in thready net lines, and splashes with sparkling spots. Then she plastically spins round her spiral shells, in Tangents and Volutes, and exquisitely paints them with delicate tones and feminine water colors.

Nothing delights one more than to discover the suggestive way in which she has reproduced the bright Radiation of the Sun-Father's beams in star-fish and coral, in sea-urchins and anemone; his colors in her sunfish and golden carp.

Indeed, I think there was a certain danger, at this time, of our Mother's emotions running away with her, while displaying her power over her fickle and variable element; and of turning us all seasick with her spinning on her heel so rapidly, and with whirling everything into circles and flying tangents. So that I find Father had a little talk with her that evening on the Force of Gravity, and Controlled Beauty, and Dignity, and even of Simplicity, as principles in a work of art. The result of which was, that a sort of wise compromise was agreed upon, and a combination-effect attained, considered by them a higher order of Beauty. And for a long spell I find them studying devotedly the charm of Balance, Proportion, Rhythm, Cadence, with Emphasis, Opposition and Contrast, to avoid excess or monotony. While she spins up the water in wavelets, he seeks to give it breadth and amplitude; while he sighs with his deep bass in the forests and rocky caverns, she sings her tender requiems in the long waves, imprisons her soft whispers in the shells, and trills in light ripples along the shore.

On this plan they seem to have moved forward with immense strides. And now that the house is getting into shape, and the preliminary era of mutual experiment and "showing-off of points" is safely passed (the one with his rocks and minerals, the other with her tender jelly-fish and mollusks wherein she seems a little doubtful as to how her dough would turn out), yet during which they both delightedly recognized the beauty of Originality, Inventiveness, Sound Construction, Order and System—lo! the children begin to arrive.

Like most young people hanging over the cradle of their first-born, I find them talking in low tones of the beauty of Mystery, Tendency, Suggestiveness, and writing them down with eager delight! Then, (with the usual scurry of excitement in a new home for the proper materials to meet the occasion) Adaptiveness, Utility, Survival-of-the-Fittest, seem hurriedly jotted down,—I think this last in *his* handwriting, as he seems to have been put out of the room; as also some remarks about "Imprévue"—which principle greatly impressed him as the children multiplied, and Progression, Repetition and Reduplication are scored.

Then, when sweeping days and spring cleaning as usual come around, she manages to get in something about graceful Metamorphosis and Transformation; and, whether he wanted to or not, he had to concede the beauty of Variety and Gradual Fusion. I half suspect it was he who interlined something about "Artistic Confusion," and a little later, in a shy, sly sort of way, Restfulness, Completeness, Finish, Sustained Pleasure. She must have come around to soothe him and kiss his forehead into "Peaceful Effect" and "Quiet Spacing" after the dizzy spirals of the Devonian Age; and the staggering productivity, variety and scaly Repetition of the Reptilian Age; or fan him into genial Radiation with the palm leaves of the Carboniferous Age; for I find him taking serene satisfaction in the gradual development of his big boys of the mammalian era, and talking about "Stunning Impressiveness," and Picturesqueness, of the value of Boldness, Vigor, Frankness, Genuineness, even Audacity and Ruggedness, which he forthwith carries out in his Jurassic leviathans, lions, tigers and eagles.

She pleasantly points out, by contrast, in her insects and birds, Skill, Lightness, and Delicacy; and (as their children play about their knees and bring to them clambering vines and fragrant flowers) Facility, Felicity, and Cheerfulness are adored as valuable art qualities. He gaily in-

vents, for her dark locks, the fire-fly for Sparkle. She presents him, as a Christmas scarf-pin, a butterfly—for Decoration.

And when at last they exclaim together: "Come, now, let us make our noblest work—Humanity," and she has matched his "Direct Truthfulness and Law" for man, with her "Encircling Love" for woman, they both declare a third great Primary necessary to unify their claims, and so they create "Childhood," with Grace, Spirituality and Attractiveness.

Thus as the Father watches, with extreme interest, the triangles, parallels and squares, in the decorations of primitive men, in the Pyramids and oblong temples of Assyrians and Egyptians; our round-cheeked Mother introduces, next, the leaping curves of Roman Aqueduct, Arch, Amphitheater, and Pantheon; till at last, through myriad constructions in Arab stars and Gothic trellis, Renaissance scroll and Celtic interlacing, the tender halo and suffused glory of luminous, rapturous Rose-window, satisfies them; and they declare that after all the holiest child of Art is simple INSPIRATION.

LOVE'S GIFT TO LIFE

"As unto the Bow the Cord is,
So unto the Man is Woman."

CHAPTER X.

THE LILY'S GROWTH

VICTORY

"THE WORLD we live in *wholly is redeemed*;
Not man alone, but *all that man holds dear*;
His orchards and his maize; forget-me-nots
And heartsease in his garden; and the wild
Aërial blossoms of the untamed wood,
That makes its savagery so homelike; all,
All have felt God's sweet love watering their roots.
There are no Gentile oaks, no Pagan pines;
The grass beneath our feet is Christian grass;
The wayside weed is sacred unto Him.
Have we not groaned together,—herbs and men,—
Struggling through stifling earth-weights unto light,
Earnestly longing to be clothed upon
With our high possibility of bloom?"

—*Larcom.*

VICTORY—OF SAMOTHRACE

(Antique Greek)

Raphael, Del.

MOTHER AND CHILD

"THE ANNUNCIATION" BY TONIO ORAGIO

THE LILY'S GROWTH

"Consider the lilies, how they grow."—CHRIST

THE SUBJECT of beauty and its universal application has been seen to be *vital to a full civilization*, alike for individual character and happiness; for historic appreciation and expression; for general industrial powers and values.

Raw material is of course, to its measure, valuable in mind and matter; but the main secret and object of existence is to advance "raw" material into "cultivated." Now let us look at the theme carefully a moment. Beauty is surely everywhere about us in the Creator's studio—He of the crown of stars and of the seven golden candlesticks—the mighty Artist-Artisan.

The very savage stops to wonder at and to string the shells; the very animal is found sensitive to color harmonies. Go ask, then, of that sea-shell, that bird of Paradise, that crystal snowflake, that melting rose,—they will not turn you away unanswered. But you must not interrogate them *externally*, merely, nor as a mere externalist yourself, lest they condescend no reply. David out of a poet-soul exclaimed, "The fool hath said in his heart, There is no God"—that is, "no Soul to things." For the very hen, patiently hatching her brood, laughs that fool to scorn. She herself *divines* full well the *inner being* invisible at the external shell; so she warms it, watches it, and awaits its appearance.

The cow and the catfish, possibly, may appreciate little of the glory that we recognize in mighty oceans or in studded starlight; in the sweeping of Autumn's robe; the gathering of

Evening's veil in the blush of twilight. They are satisfied with the grass and the worm; their god is their belly,—as with so many human beings descended to the same level, who dispossess themselves but not the actual reality of the Divine Presence in nature and beauty. Indeed their very materialism sets off this presence, by contrast, and adds strength to its pregnancy and impress. "I called you," says God, "but ye answered not;"—the fault was in their own elections.

"Thou sendest forth thy Spirit, they are created:" cried David, "and thou renewest the face of the earth." And as the Creator explains his purpose to Job, "to cause the bud of the tender herb to spring forth," it is "to satisfy the desolate and waste ground" where no man is. Beauty is beloved of Heaven for its *own sake*. The edelweiss upon the inaccessible glacier still glistens, in the eye of God, though no eye of man approach it.

To the living soul, then, the flower will answer. But it is the spirit of the lily or rose that must speak to our spirits and summon our intelligence, perception and sympathy.

NOW HEARKEN to what the flowers say: "No atom touches its fellow, in life. Each atom is held in a flux of Spirit. Crush our bloom to powder in your hand; drive out from between our atoms the mystic *ideals* we are;—behold! you clutch the same quantity of matter in your palm, but does the desiccated and desecrated dust give back to you our *beings?* That arid powder is not *us* (the lily and the rose); yet we were there a moment ago, as living, evolving poems—we were made flesh and dwelt among you, but you drove us out! Our spirits have returned to God who gave us."

Can those spirits be called back? Yes, if their immortal parts have entered into man's own immortality—for nothing was ever lost. Was it Emerson who looked over the florist's fence and said, "You own the flowers' bodies, but I own their souls"? If Plato's spirit has caught the divine beauty of Socrates' then he shall indeed resummon the Saint from mighty Erebus. If Sibyl can recall Apollo's lyre or Orpheus's strain, these latter shall revive. Can artist-soul absorb and revisualize the glowing rose? Then its glory shall burn upon his canvas. But what is it that he must recall, and with what body shall it arise? That which thou holdest of the idle dust was its earthly body; that which is reborn to thee will be its heavenly. The atoms may be wholly new and different (in the artist's pigments) yet the inner spiritual self of the rose will rise again, and you will recognize it. The internal ratios and formal arrangements of the atoms will be there now, since they were *intellectual and emotional elements* in God. Their beauty in reality never was material, (as the change of substance shows), but was a spiritual revelation through the material.

THE CHRIST, pointing to a flower, exclaimed: "Consider the lilies, *how* they grow"! Yes, that is the very point. The lily is a live entity, an evolving spiritual organism—not mechanism at all. It is preëminently *an idea*, an ideal, hidden in a seed,—a tiny, almost intangible life-germ, which, "if a man should cast it into the ground," it would "spring and grow up, he knoweth not how." But he might know how, for it had Character and Individuality at the very start. It had Faith, Energy, and Purpose; it dreamed an ideal Realization; its dream was a lily and not a rose; it put out its tendril fingers toward the atomic dust about it, and purified those atoms at its own touch of spiritual purity. What did it first manifest? An organic Desire to be one with its almighty Mother; its roots took hold upon her life. It strove to be one with, and to arise and go to, its almighty Father; its arms sprang up and aspired to heaven. What was its hope? To express itself, *in* both, *to* both; and to live to the glory of both, and to the benefit of attentive man.

Whereby was man first attracted to the flowers and what first in the heavenly visitors did he behold?

First, their Motion, the *way* in which they grew. The lily was stalwart and triumphant in its strong, bold force and will, to herald the Easter with a spotless trumpet. The honeysuckle was

tender and twining, anxious only for the rapture of the ravishing bees. The pink blushing arbutus went creeping through the forest, a wood nymph tiptoeing the pine needles and leaves—fresh as the opening spring from snowy couch, and trembling to Apollo's call. How different their intents and actions! How full of *character* already their growth!

Secondly, whatever of stateliness or timidity or passion they may individually display, they all together, seek out their personal limitations in Measure, and balance their Symmetric extensions by delicate Gradation and Proportion.

Thirdly, they take up Form by beauty of lines, surfaces, and solids. The cylindric or conic stems and outlines, or the internal markings of leaves, are not only studied for distinction and style but for their gracious carvings and variegated contrasts of leaf surfaces; and then for the whole world of charming fruit and blossom! Now look at any one of those resplendent blossoms. Are they not studiously planned to constant and consistent internal Composition—full of character? Every one upon its mystic geometric formula that it forever knows. What ellipses and ovals, and parabolas and hyperbolas! What concentrics, spirals, tangentials, radiates! Yet what Unity, Harmony, Proportion, Elegance; what balanced Rhythm, Symmetry and Grace! And now, to add attractiveness, exhilaration and fascination, the Almighty surcharges them with scent as well as sentiment; fragrance so intoxicating yet refined; colors so diaphanous and paradisial; textures so translucent and caressing that an infant's cheek might blush to touch them or a maiden's lip to challenge them.

Fourthly, what arrangement in clusters collective (after each petal and flower is perfected). What play and revel as they dance in the wind together; what distribution upon their stems; what coy concealments and revelations; what ravishing loves with the bees; what flirtings with sunbeams; what murmuring with humming-birds!

Now, when we come to ask what fraction is this flower-world of the museum of God; how the fairest of the flowers is but a step up from the gems that sparkle and crystallize in the mountain, to shells that roll and radiate in the foam—up, up through chanting bird and leaping beast, to statuesque, artistic and constructive man; what everlasting Constancy we discover in the Soul of God to charm and delight us, to enchant and educate us; and always to achieve it by the same eternal Elements and Principles. It is ever his purpose to inspire us by his sentiment, poetry, and taste; to quicken in us perception of his vital principles as well as observance of his orderly methods. He increases our power for perceiving these as we rise in the scale of being, and as we sensitize our spirit (if we will) by communion with his spirit. Where the lower grades of life embody those elements unconsciously, man is able both to embody and represent them consciously in his person and arts, and has faculties granted especially for that purpose. He not merely possesses higher observation and reason to comprehend law and process; with higher invention and imagination; but discernment and insight to *divine* the spirit, purpose, and principle involved; ideality to raise the quality or sublimity of his imaginations; visualization to revive and reïncorporate his embodiments; and selection, elimination, adaptation, the better to display noble judgment, preference, control, while enhancing, embellishing, and vivifying his life and art expressions. But preëminently he has *Spirituality*, *Sympathy*, and *Appreciation* to extract life's quintessence and to assimilate or suggest her charms.

NOW, it is these Faculties and Forces of a student's soul that a true Art teacher should develop, for it is an inherent part of the Eternal Spirit in man, that these should be present, latent, and starving for exercise. In a dumb, blind way the cheated soul, like a child robbed of its mother's milk, strives to feed itself on husks of esthetic odds-and-ends; crumbs that fall by the wayside. This accounts for much of the sensationalism of papers, the popularity of cheap stories and chromos, for the masses. It is their crude protest against the sterility of a mechanical existence or education; against the stagna-

tion of trade drudgery, the bleakness of much domesticity.

What a godsend to such worker is a Christmas window; the rockets and heroes of a military procession; the glory of a country fair or summer excursion. It is the cry of the under for the upper life; the suffocated struggle of the spirit for its inheritance beyond matter. Now, of all schools and classes, an art school should most appeal to and stimulate the soul in these directions. The ordinary burdens of "practicality" in the world around do enough for the opposite result. We forget that what constitutes true practicality, in the great school of life, is *that which best developes a soul for Life, now and evermore;* but alas we have practically forgotten that what gives highest values to industrial commodities must ever be the taste and skill of Spirit.

A great manufacturer once said to me: "What we most need, in our sharp competition with world marts, is originality and creative taste to 'lay the good eggs,' for we have commonplace hens enough to sit on them afterward." Here truly is the secret of our commercial situation; we have trusted in our "raw" materials but have left our workers also "raw" in much of what was most vitally essential for handling our materials. "The Three R's" were deemed enough if they taught children to count and keep tally on products, but not to improve the *quality* and *saleableness* of products. That was a fundamental and pitiful error, eating the roots out of our civilization and prosperity, for we teach our young to *speculate upon production* instead of to *develop themselves by production.* Work is not given to man to destroy him but to elevate him; our children are taught to despise work, to drop it, to even hate it, to make "capital" and "social pose" out of degrading it and disfranchising it, instead of seizing the opportunity to ennoble themselves by ennobling it. This has come largely from our children's finding it (and themselves) crude and raw and uninteresting. Lack of capacity (in themselves) to beautify labor has made labor itself less beautiful to them. To elevate the taste of skill which we put into labor is to elevate our idea of Labor to where God would have it; for a fine tree may be variously converted—into pig-pen or parlor table! It is the same tree in either case, but how different the resulting values (alike moral, intellectual, commercial), both for the worker and for the work. A blind, mistaken practicality has prevented our being really practical—in the larger, better, and nobler sense—for our false guides have overlooked the immense benefit, uplift, and emancipation coming through enlightened and heightened skill, originality, and beauty.

GRIM experience at sad cost has taught Europe, and even Asia, to value those children who show the artistic and idealistic temperament, as fine gold for the national wealth, as fertilizers of the common soil, yeast in the dough of life. Foreign governments have grown cautious about extinguishing that fire of genius, or about insulting that sacred gift of insight, intuition, creative taste, and inspiration. Careful systems, rather, are being introduced to discover and protect such light (even in humble hiding), and to steadily advance it by systematic care.

In France a graded scale of helpful scholarships extends from the remote hamlet to the highest seat of the Academy or of the Legion of Honor. Each village contributes to send up its best boys to the canton; the canton compares and sifts and lifts them to the department; the department advances them to the national capital, where state tests approve, reward, and instantly utilize such refined powers; directing them permanently into the best national channels. No wonder French skill is so advanced and their periodical exhibitions so attractive.

What a contrast, this, to our crude and cruel mode of neglecting, insulting or trampling out our finest art genius beneath the hoof of vulgar brutality; blighting the light from their souls and hope from their hearts by the coarse ridicule of the greedy and avaricious—in the same jealousy, at nobler aspirations than for the immediate hour, that Joseph's brethren showed to him when they buried him in the dry wells of their materialism; dappled with blood his "coat-of-many-

colors"; and sold him to slavery and imprisonment, forsooth because the angel of the Lord had spoken to him! Then, too often, our politics (by shufflings, wire-pullings, nepotisms and tricks) disastrously install sly sycophants and incompetents, in posts of power and responsibility, for which the Almighty had prepared more genuine men-of-destiny and devotion.

A striking comment on these contrasted methods is the recent confession of a New York Commission (for a Monument to the Founders-of-Manhattan,) that "after five years' search in our country for a tasteful, original, and appropriate design" they had "been compelled to copy an old foreign statue of William the Silent." And again a similar comment is the award of the new University of California buildings (after a world-competition under a world-commission) to a French architect developed by his nation's art encouragements.

The traveler in France knows well how there is scarce a village but has its little museum or collection of beautiful things for the people's education; at least some quaint old church with worthy masterpieces of skill to inspire good execution and to waken reverie and imagination. As in India, Japan, Greece, and Italy at her best, the communal family life of the cities was enough more humane and fundamentally Christian than ours, to spare a public hour or spot, on the public green, to "watch God come down in the May-day blossoms"; to worship and dance, naïvely, in his innocent sunlight. How many grassy lawns they rescue yet for public use, for breathing spots and nature-trysts, to save the children or the aged, and to cheer the weary worker by a breath of twilight freshness, and perchance by a village band. Here in America, with far larger space and yet unobstructed chances, we suffocate and crush ourselves and our toilers in the huddling and hovel-making of idolatrous Mammon—then hypocritically hide such hardness by multiplying hospitals.

There, every city of any size provides its youth with good industrial schools. Here (in a "Republic *dependent on industry*" and on the vote of the industrial masses) one must almost bear martyrdom for suggesting such institutions. For twenty-five years, in New York and New Jersey, and generally with a powerful corps of selected specialists, I repeatedly built up crowded and enthusiastic art-and-artisan departments for various institutions, such as Princeton College; the New York Metropolitan Museum of Art; the Artist-Artisan Institute; and the Art and Science Institute of Trenton; all of which held successful exhibitions, obtained abundant prizes or international-exposition awards; educated and located thousands of talented pupils whose letters of gratitude still pour in from every state; yet I *cannot recall but one generous contribution correlative with such a philanthropy*—and this in spite of constant and warm press indorsements. But ever we encountered the obstruction or obloquy of the importing and monopolistic elements who "wanted no American art" or wanted it "all to one's self;" or pseudo-aristocrats (with little *inner* aristocracy) who wanted art a "fad"; apathetic patriots who had "no hope for good in Galilee"; republicans who "feared the influence of education on labor" lest higher capacities might ask higher wages—forgetting that higher ability to produce makes higher ability to pay. The fault is, in part, a popular misconception that art is fashion and craze instead of *an enduring inspiration in nature and a necessity in life and labor*. Narrow professional art is partly to blame for this blunder, because its lower representatives pander to passing fads and ephemeral poses—many so-called art schools being only mills for petty technicalities and manual dexterities. But probably the worst obstruction to National Art has been the mimetic and mechanical "copybook system" that penetrated so widely, being exploited by syndicates and trusts who plunder the ignorant with cheap methods that do not get past the elbow-joint—a superficial Juggernaut rolled over the necks of the teachers and children alike. The higher trust to God, man, and the nation being totally ignored!

That national and poetic artist, William Hamilton Gibson, when coöperating with me in my New York work, once echoed a similar distress at such conditions, by saying: "Yes, Heavens! every American is *entitled* to a vital poetry and

a vital art essentially one's own, for I would rather be a simple dicky-bird and to sing my own song than to be the most accomplished mocking-bird in the coop."

And this is veritably the essence of it all; to take each student and child as God brings them to you—full of sincerity, spontaneity, personal life, and imagination; to gather them from *their own* experiences (as the Japanese do their scholars from a recess by some carp-pool) and to urge each student to record what most *interests* himself. To one the reed nodding at the water edge; to another the dragon-fly flashing o'er his head; to another the fish, its color, form, or movements. Each pupil should have his "say," each life have its organic self-expression. It is his gift from God, one after this manner, another after that; yet through all worketh the self-same Spirit of nature, dividing severally as SHE will. Give to each child his *natural* theme! Is it the darting curling of the carp? Help him to arrange those lines effectively and decoratively, as a pattern merely, and as the Japanese patterns so daintily suggest, with scattered leaf or fish tail for variety. If he is a little formalist, charmed by clean-cut form—careful and analytic instead of lively and decorative—show him the structure and analysis of the form, accenting its character and dominant style, (sleekness in fish; lightness and grace in dragon-fly). If he is a born colorist, and the gold of the fish's side entrances him first, a thousand times sooner let him splash his color-box till he finds a tint reviving that color-vitality than to extinguish his personal vitality and interest. The first of principles is to *meet him half way;* satisfy his hunger by the food he can assimilate, not kill him by giving him some other's diet. Perhaps shortly he will grow to welcome both diets, having first seen somewhat the fulfillment of his own dreams.

At the close of the lesson, after the teacher's help has brought out some genuine realization to the students' ideas, let the students compare their sketches and discover each other's qualities. Next week all will do better because of those spontaneous expressions of all, and for the dew and sunlight of the teacher's sympathy. Ever be organic, ever original; never mechanical, automatic, perfunctory.

Feeding the body or the soul is a similar process. The student system absorbs what it craves. When a wholesome craving enlarges, then enlarge that diet. The specialists on Movement, Form, Color, or Light may interchange inspirations by glancing over each others' shoulders. Then is the teacher's opportunity. Then show how nature is *all of these special aspects and more,* but that she ever *selects* and *emphasizes* special elements for special expression; reproportioning or reärranging for each new character and story. The vine may emphasize Line, the lily emphasize Form, the sea-shell Color, the peacock Decoration, etc. Over all is the glory of Light, scintillating, changing, softening, grading.

A CHILD fresh from heaven is a natural born poet and artist. How he dreams and imagines and loves to create! What tournaments and mighty conquests with tin-soldiers and trumpets. What cavalcades with trains, what dramatic talents with mother's wardrobe. What palaces with blocks and Noah's arks with scissors; and, oh, what Columbus discoveries in forest and orchard; what Walhallas and fairylands in attic and moonlight!

It is the world, with its cruelty and stupidity, that kills the light in his soul—grinding out his genius, dragging down his Pegasus! The kind teacher should try to save that spark of heaven and to keep it aglow—fanning its measure of success, not ridiculing shortcomings nor mocking at mistakes. I have known insignificant martinets take most of their time and satisfaction in picking flaws and ridiculing the very darkness they were invited to enlighten. An ordinarily bright child has wonderful intuitions, alike on the character of the teacher and the character of things. He will generally seize, by instinct, the interesting or the vital. The Creator is merciful to him in thus gifting him ahead. A true art teacher must fortify that gift—for it is *very vital*—and should bring out the special emphasis nature adds to her ideals (her love of the picturesque, the

decorative, the precious, the harmonic) noting her wonderful composing powers, her proportions and faculties, her embellishments, and styles.

Do not think the child nature is barren because it is new soil. Those universal properties of spirit lurk latent in *all* youth. I have handled hundreds of all ages, of both sexes, and of many nationalities, but *never yet found one soul that would not yield to right treatment.*

The gardener does not discard in July the unripened corn of June, but he manures and waters; he trusts God and the harvest. The faculties of Observation, Form-memory, Form-analysis, Form-experiment, Contrast and Correlation may come before elaborate Composition (though of less esthetic value than Selective taste and Creative imagination). But this is because the scholar must have before he can handle, must possess before he prefer, must read before he write, or at least must know symbols before arranging them. A wise mother utilizes his curious cravings, so as to fix names and traits which he can remember and reëmploy. She points out interest in things and animals; and riveting attention she fixes attributes by literary symbols ("B is for bumblebee, bouncing and big," etc.). She quickens his sentiment in them by stories about them, and starts inventive plays to stimulate constructiveness. If now an equally considerate father gives him a garden-patch and lets him grow seed-dreams till the child catches nature's method of practical steps in attainment, then the child has learned her Order, perceived her thought and purpose, and is prepared to assist her intelligently and efficiently.

The subjective and objective sides of art must similarly be balanced and harmonized; one or the other side is constantly ignored or overestimated, and sometimes pitted in petty quarrels. In France I noticed the second tendency overstrained; in England the first; and how often elsewhere have I seen delicate poetic spirits (full of subjective force and ideality) suffocated by mimetic teachers; the mainspring of inspiration destroyed by little "parrots-from-Paris," whose crops were full of mannerisms. Objectively expert, they lacked every germ of *original feeling* and might have said (like those poor gentiles of St. Paul's,) "We know not whether there so much as be any Holy Spirit." Which recalls what a talented Japanese artist once wrote to me: "We Japs know it to be impossible to literalize nature in her changing moods, movements, and hues, so we try to *present her Spirit, her Essence.* We express *our own* spiritual quality or knowledge of her higher ideals, her image as reflected in our souls, and call this the Beginning-of-Growth."

How admirable this is—and how fundamentally true! If we *had* more soul we should *see* more Soul in nature. If we were a less materialized nation (that is, less of that class that Solomon describes as "greedy of gain, which taketh away the life of the owners [real producers] thereof,") we would live more ourselves and help others to live more; not starve the natural soul to stuff the natural body; not grudge the poor the little happiness or hope, or uplift, that our selfishness should justly afford them. Still less would we continue to cover our national and personal faults with cant and hypocrisy, political hocus-pocus, and fad charity.

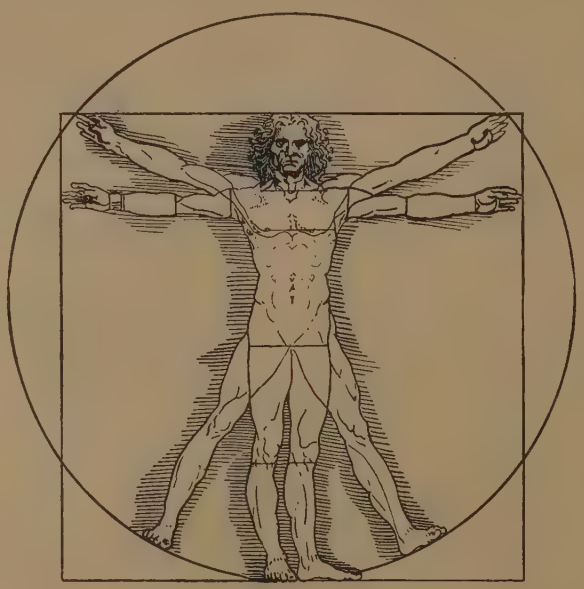
WE HAVE come to the Latter-days, the Parting-of-the-ways, but the Meeting-of-the-waters. Our age and civilization are having their essential falsities exposed, but their essential vitalities and virtues poured together. Out of this alembic must come a new crystallization which shall be, to the sincere in heart, a new heaven and a new earth, in which dwelleth forever the righteousness alike of Beauty, Goodness, and Truth. We will *feel* God more universally and more *visibly*, and *reveal him more vividly and democratically* to the starving children of men. In art, as in so much else, they have cried to their leaders for the Living Bread and been given back stones; they have implored for fish and been given the serpent "trusts and syndicates"! The cry of the Prophet Ezekiel rises over the educational and political wastes where the people wander spiritless and broken by ravening wolves, and warns the age, anew, in the accents of the Most High: "Woe be to the [false] shep-

herds . . . that do feed *themselves!* Should not the shepherds feed *the flock?* I am *against* the shepherds; . . . I will deliver my flock from their mouth: *I Myself will feed my sheep"!*

OUR educational methods should therefore take this vital lesson from Nature, and educate the souls of students in Essential Beauty (internally and externally correlated, as the term Artist-Artisan implies), and should associate Hand, Head and Heart in a vital union. It must be both educational and practical—because the best education and the best practicality comes from this organic union of soul and body, of thought and deed, of conception and of execution, which is the tangible ideal of God.

We should not murder the souls of the young by dead and sterilizing methods, nor by copy-book systems of external unintelligent mimicry, that degrades them to monkeys instead of raising them to men. We should appeal to the God-Spirit within each human soul, and fortify and develop it by the living and inspiring Principles of Beauty, adapted to every material. Originality, Ideality, Order, Proportion, Balance, Harmony, etc., as parts of God's Spirit, are applicable to all times, places or substances. Each age, nationality and individuality is to be reinspired, readjusted and restored by these, according to new needs, new conditions and obligations. New opportunities are thereby utilized and new virilities begotten. All of which adds new interest, delight and value to human industry, expression and society, and prepares man better for eternity.

Nature thereby becomes the Friend-of-man, and full of wholesome delight and instruction, according to first intentions as the "Visible Studio of God." She stands ready to reveal, anew, to every age and soul, the Beauty of Design; the secrets of constructive Growth; and the wise methods of adaptation to *all* matter. All materials may thus become eloquent of spiritual beauty (instead of ugliness) and all industrial or social prosperity become enhanced by the happy correlation of good Science, good Religion and good Art. Indeed the Beauty of all Form or Feeling becomes the *harmonious adjustment and proportioned expression of these Symbolic Significances*—of Right, Round and Radiate Relations—according to special fitness in Eternal Principles and their applications.



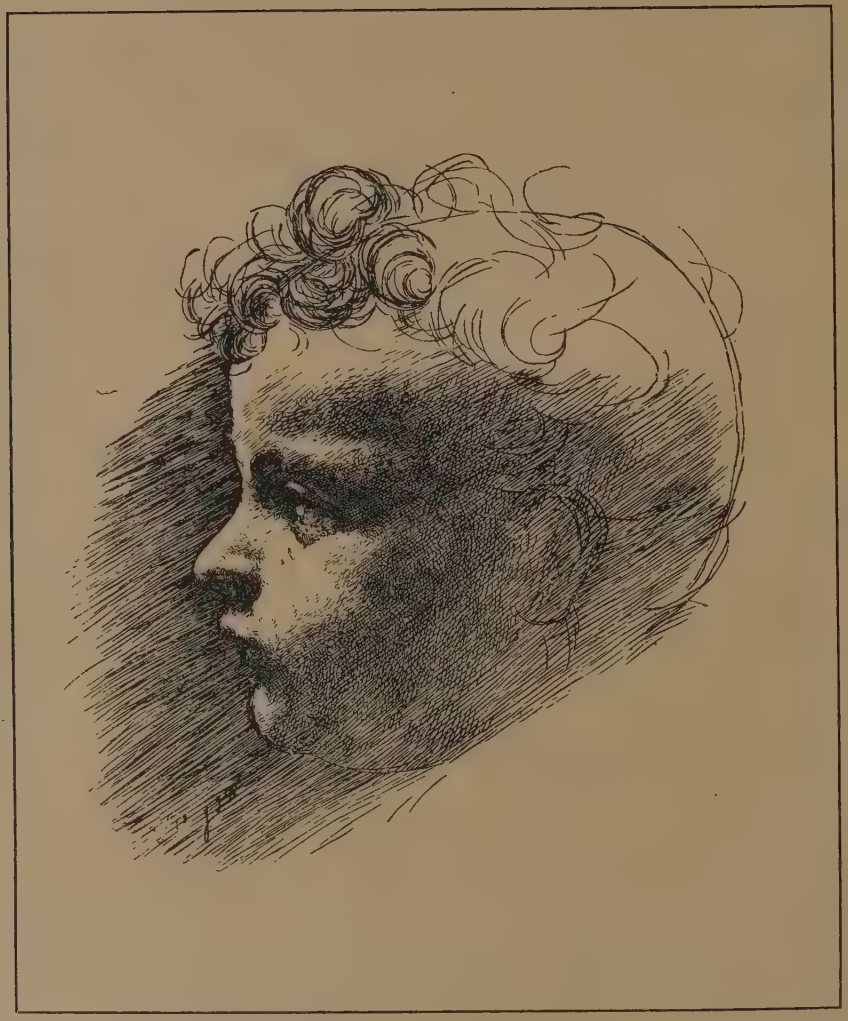
DA VINCI'S STANDARD OF PROPORTION

(Uniting Square, Circle, and Star)

A few brilliant and wonderful drawings of the greatest art masters, here inserted, will help to illustrate these truths.

Thus Da Vinci shows how man's form (when radiated Star-like across the Square and Circle, in the measures of the finest Greek proportion) reveals the secret that: the Square is the basis of man's strength, in reposeful-rectitude but initial-energy: the Circle is the basis of his second (or female) phase of transmitted-energy in plastic-action. The Square is energy crystalline and static; the Circle is energy mobile and dynamic. The center of the Square is at the center of male generation. The center of the Circle is at the navel, where the child's link to motherhood is severed—to be born for itself a new and independent soul.

When stretched at right angles, to the upright body, the radiating arms form a cross with the spinal column, which latter itself corresponds with the perpendicular axis of the Square. The finger-



Da Vinci, Del.

HEAD OF A CHILD

(Note the structural *per*-ception of head through hair)

tips, in this case, just touch the sides of the Square. When, however, the hands are raised higher, to the level of the head, so that the arms more closely correspond to the diagonals of the Square, then, Da Vinci found the longest finger-tips just reached the points of juncture of the Square and Circle, upon their perimeter.

Thus every human form combines and harmonizes, in its being, the secret strength and beauty of Square, Circle and Star, when the rectitudes of Truth are wedded to the plastic and receptive energies of Love, and are *born anew* by Genius into the radiate brilliancy of diverse and organic applications, by Just Proportion of these elements.

It was exactly so at Pentecost that the Holy Spirit showed to each man, through "his own language," both the Motherhood of God's nature in Love, and the Fatherhood of God's nature in Truth and Law. Short of these Perfect Proportions there must ever be a sense of deficiency and ugliness, a fact which throws light upon the apostolic injunction to attain "the stature of The CHRIST in whom dwelleth the fullness [*i. e.*, Perfect Proportion] of The Godhead, *bodily*"—the Godhead made Perfect-Man, yet ever appropriately readapting divine Principles to any and every new situation of life, according as time, purpose, place and utility requires.

MICHAEL ANGELO shows in his picture of "Fortune-upon-her-Wheel" (or Female Beauty *balanced* upon the Circle, see page 209,) the great principle of Equilibrium and Vital Symmetry, so universally constant throughout nature; and as balancing Life and Progress upon the dualism of Repose-and-Action; and as qualifying the opposite sides and progressive steps of man. He shows also that while mechanical drawing will do for mechanical forms, such as the wheel, yet *vital and organic drawing must be applied to the higher and organic forms of life*, such as the form of the woman. No one can glance at this beautiful figure without noting the free and inspired way in which the wings are drawn, how the winds of life fairly rustle through their plumes! The soft and flexible female flesh is done with a tenderness and reverence all the more striking for the evidence of anatomical knowledge and structure beneath, which is, however, always kept most artistically subordinate to the higher feminine qualities of Grace and Tenderness. While below her figure, and, as it were, far beneath these loftier elements of artistic freedom and emotion, comes the crude mechanical drawing which is but for the first primitive transmissions of Force. This should be a lesson to all our national life of how vastly the higher, freer and more spiritual elements of civilization and inspiration exceed in splendor and potency all the mere mechanical processes for creating or preserving material wealth.

Da Vinci's drawing of a Child-head shows the artist searching through the curls for the structural skull that first supports the curls. He does not "block" these delicate and tender curls with a stiff stroke wholly antagonistic and inorganic to their spirit and nature (as do the wretched "blocking systems" invented for blockheads) but having first keenly and lightly *per*-ceived and then indicated the hidden truth of the supporting skull, he delicately models up its solid form and features wherever visible, and is then free to add on lightly and expressively the delicate and playful beauty of the curls, with all the appropriate transparency and elegance which bespeaks their ornamental and graceful nature. He here shows us the classic and masterly method of Vital Draughtsmanship.

Identically the same great principles of *Per*ception and Sequence we note in the next illustration, where Raphael's soldier with the shield shows the great artist *searching through the shield*, and defining carefully the human arm that supports the shield, *first*, that he may afterwards rightly locate the overlaid shield, and obliterate, if need be, the preliminary steps of caution, preparation and structural perception by which his genius at last attained its perfect end. So in his drawing of the "Father-and-Demoniac-Child" (from his picture of "The Transfiguration") an indication of a rear thigh is *seen through* the front thigh

of the father; which shows how carefully these great artists followed the principle of Sequence in the order or stages of their procedure; developing art *from within outward, and from behind forwards.* They do not flatten forms nor mimic them blindly and externally (as in so many schools) *but they comprehend Life internally so as to interpret it freely, solidly and organically*—as several other drawings by Dürer, Angelo, Rembrandt, etc., will show.

This search by the great masters for those vital and internal elements of Life and Feeling, by organic processes and principles, which lead them inevitably to discover and know the Invisible and Eternal in its orderly Sequence, before expecting vitally and expressively to seize and secure its outward evidences, is so marked, that, in so great a master as Michael Angelo, its search seems almost to overwhelm and fill him, and to almost overmaster his power of self-control. In his "Last Judgment" it threatened his larger and calmer powers of classic Temperance and balanced Beauty in total composition; which fuller serenity and sublimity was more judiciously preserved by Raphael. Yet nothing save a few of the grandest Greek masterpieces can exceed the stupendous energy and vitality with which Michael Angelo sought for and attained this marvelous virility and actuality of LIFE. We note this in his adjacent head of a screaming "Fury."

In the long run of life, however, it is not so much its Intensity as its Beauty that must prevail. Not Quantity but Quality. Though there is no inherent reason why a noble Art should not bring these mighty elements and essentials into just and harmonic Association and Proportion. It is for this adjustment that the noblest spirits strive, and the saddened and distorted ages wait and labor on to its attainment.

The Two Female Faces, in opposition, by Poccacino, display not only the artistic principle of Contrast, but sharply set off Beauty against Ugliness, in a way to show that although both heads are vital, organic and structurally developed, yet the hag's face has violated Esthetic Principles which the maiden's face has preserved; *i. e.*, such guiding Order, Proportion, Balance, Harmonic Arrangement, etc., as God establishes in his elements, his intents, and his processes, in his effort to reveal to man the Immortal Principles of his Spirit in Temperance, Moderation and Majestic Beauty.

Raphael, Del.

STUDY OF WARRIORS

(Note the arm *per*-ceived through the shield)

Raphael, Del.

STUDY FOR "THE TRANSFIGURATION"

(Note the *per*-ception of one thigh behind the other)

Hokusai, Del. By courtesy of Longmans, Green & Co.

A WOMAN AND TWO WARRIORS

(Note the *per*-ception of the arm through the sleeve)

M. Angelo, Del.

HEAD OF A FURY

(A Vital Study for Vital Expression)

Poccacino, Del.

UGLINESS AND BEAUTY

(In Strong Contrast)

"THE BEAUTIFUL is better than the Good, for it is the Good made *perfect*."—*John Stuart Mill.*

"IT IS ART alone which marks the prime of nations."—*Herman Grimm.*

LESSON CHARTS
AND
CLASS OUTLINES

CHAPTER XI.

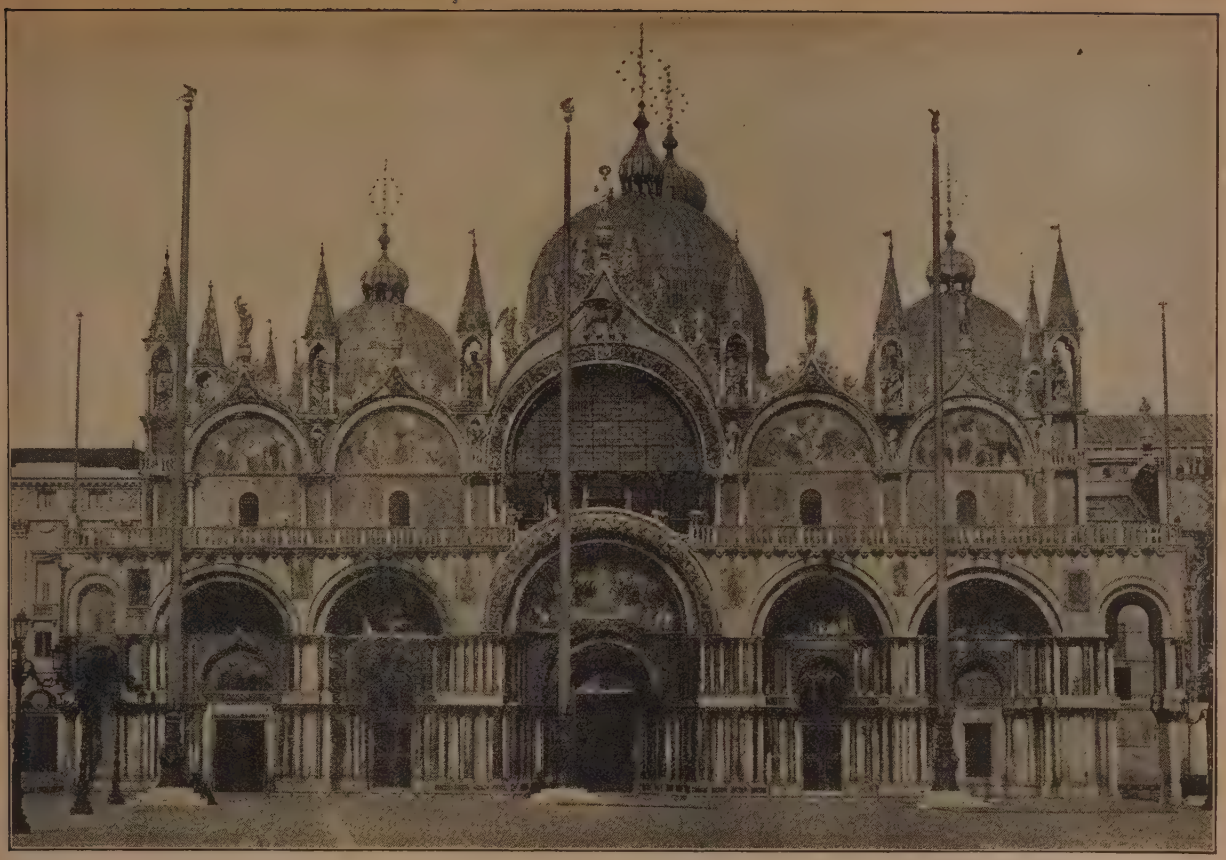
FORM-REASONING, GENERATION AND EXPERIMENT

Rembrandt, Del.

THE STUDENT AND THE HOLY GRAIL

"AND in the midst of this wide quietness
A rosy sanctuary will I dress
With the wreath'd trellis of a working brain,
With buds, and bells, and stars without a name,
With all the gardener Fancy e'er could feign,
Who, breeding flowers, will never breed the same:
And there shall be for thee all soft delight
That shadowy thought can win,
A bright torch, and a casement ope at night,
To let the warm Love in."

—*Keats.*



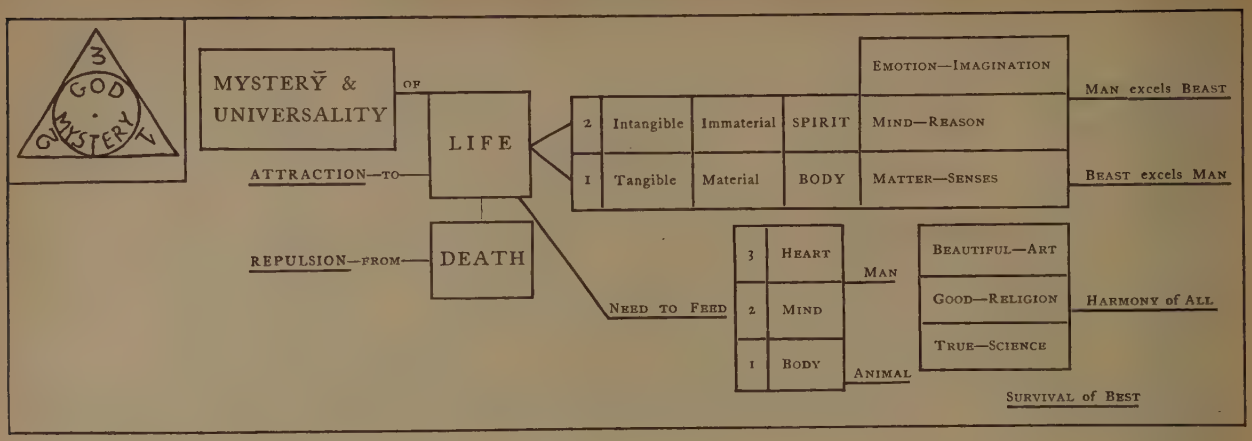
SAN MARCO CATHEDRAL VENICE, ITALY

INTRODUCTION

I HAVE, thus far, reviewed the field of Art, in the philosophic and historic sense, in order to open up to the general reader something of its wonderful importance, suggestiveness and fascination; but the remaining half of my book will now be treated more distinctly in the professional and practical sense, for the especial benefit of those who, as lecturers, superintendents, art students and practitioners, desire some logical and orderly classification of esthetic thought and practice, in the several fields of Form-Reasoning and Analysis, Form-Generation and Form-Experiment; Vital Drawing, Harmonious Coloring and Aërial Perspective; and finally in Applied Principles; Historic Methods and Decorative Devices for artistic composition and adaptation to varied materials.

These consecutive subjects I have now conveniently classified and subdivided so that the mind and hand may progress easily and systematically through them. The eye is aided to catch and retain the most important or significant laws by such salient setting in their due relation or classification, that a careful reader may steadily educate himself, if he will but take reasonable interest in so rich a theme. The subjects will be found to grow more and more fruitful and fascinating, as attention and practice gives one facility and power.

To superintendents and teachers, especially, this orderly and organic advance in rational stages and steps, will be found particularly helpful from the careful and progressive way in which I have tried to define Vital Principles, marshal fundamental elements and then connect and explain their working with elaborate illustrations. Thoughtful, intelligent minds and sensitive observers, in any and every field of life, will find that these pregnant and majestic Principles of Beauty will vastly enrich experience and production and open up to the soul its divine heritage in Natural Beauty and Universal Art.



LESSON AND CHART I.

Let the Teacher SHOW—

That everywhere about us is LIFE. Its Mystery and Universality invite us to its study and its presentation.

By his earthly limitations, man is unable to know All Truth, but is entitled to know and utilize All Truth that he can.

Hence the art student should approach his themes with both Modesty and Courage, and should retain both these and Mystery as elements of artistic charm in his work—His Soul reflecting and responding to these characteristics in the Soul of Nature.

LIFE is the main source of interest—in ourselves and our work.

Distinguish between Quantity of LIFE (which generally decides its Passing Interest and Individuality) and Quality of LIFE (which generally decides its Permanent Interest and Beauty).

We are irresistibly { drawn to and fascinated by Life, / repelled from its opposite—Death, } in Man and his Works.

Our Art, then, must preëminently possess the quality of Life (genuine, organic, individual and interesting; not sterile, imitative, mechanical, perfunctory).

It must be refined and ennobled by the quality of BEAUTY—which comes from Eternal Principles intelligently assimilated.

SHOW—

The fact that, scientifically, "Nothing comes from Nothing," but always "Something comes from Something."

Hence we can logically reason back from Mind and Heart (Intellect and Emotion) in Man, to Mind and Heart (Intellect and Emotion) in God.

That (in our ignorance of what Matter is) Nature or Cosmos may be an incorporation of the Soul of Deity, as a human body is an analogous incorporation of the Soul of Man.

(There are "celestial Bodies and Bodies terrestrial"—the glory different, says Holy Writ.)

LIFE about us can be broadly divided into—

1. The tangible, material, physical BODY—which we touch, handle and weigh.
2. The intangible, immaterial, spiritual SOUL { which we cannot touch, handle, nor weigh, but / which we can appreciate spiritually, and / which we can assimilate and reflect in our work.

SOUL communicates with SOUL through Senses of { Sight, Hearing, Scent, Taste, Touch, } whose bodily organs convey impressions from the outer to the inner world of spirit, by means of Vibrations-of-Force.

SOUL passes judgment upon the Motion, Measure, Intensity, Arrangement and Significance of these Impressions (as a blind musician would upon the Motion, Measure, Intensity, Arrangement and Significance of another's harp vibrations).

Hence the limitless Variety of Impressions that a soul may receive, upon any of its (Physical, Intellectual or Emotional) planes, and from all extremes of (agreeable to disagreeable) qualification; such as from { Harmony to Discord; Gentle to Harsh; Sweet to Acrid; } etc.

Beauty, delight, good judgment, good taste, etc., may be conveyed through *all* the senses, but the highest sense, the one man is least willing to lose, is Sight. By it is established that One Universal Language, which by optical art makes all nations akin, and all mutually intelligible; the Japanese, Italian, Frenchman, German or Englishman being able to understand each other's Art Language when often utterly incapable of understanding each other's speech.

The Artist is the Soul which manifests and conveys Beauty by any of these senses, but the highest Artist is he who works in the highest ways, through the highest senses.

SHOW—

That in mere power of organs the animals far excel man. { The hawk outsees Michael Angelo. The hare outhears Beethoven.

But in the subtler power of Soul Perception, behind the senses, man far excels the animals. { The hawk sees. The artist *per*-ceives.

SOUL may be broadly divided into { The Intellectual Realm of Reason. The Emotional Realm of Spiritual Feelings and Susceptibilities.

Food and cultivation for these is more important than food for bodily functions, for the first are the main concern of intelligent and spiritual beings, while the latter are the chief concern of the brutes.

VOLITION is the highest responsibility of free Souls, by which some nobly choose and elect to pursue special research—

{ Scientifically—for the True, Ethically—for the Good, Esthetically—for the Beautiful, } though "These Three agree in One."

LIMITATION RELATIVITY APPROPRIATENESS TO SPHERE SELECTION

The ARTIST selects A SENSE CHANNEL, through which to study and to express } BEAUTY IN

		Aspects	School	Guide
3	Emotional		After	Self
2	Intellectual		During	Teacher
1	Material		Before	Nature

TREE OF LIFE Cosmic National Artistic
Germ Vital Force Plan Method
} "1st, The Blade 2d, The Ear 3d, The Full Corn"

LESSON AND CHART II.

Let the Teacher Show—

That as Earth is but a limited part of Cosmos, not only is Limitation and Measure an important element in Nature and in Mind, but also of all human work. The attitude of the artist must frankly be that of Interpreter, not Imitator, of Nature. For she is so transcendently his superior that all his attainments can be but relatively perfect, and they are best when frankly and confessedly relative; when they are strongly *suggestive* rather than imitative, and when they are frankly adapted and appropriated to special conditions and circumstances of design. Make clear the impossibility of imitating each leaf or grass blade—but the higher satisfaction and delight attained by the imagination through the power and beauty of Suggestion. The instant this truer attitude is taken Nature gives us all her best, *i. e.*, her Spirit. We are enabled to convey her sentiment and suggest her ideals.

The nobility of our Selection and Interpretation will decide the nobility of ourselves and our work.

Show—

That of all Seekers, the Art student has selected to study the Artist—his Realms, Ideals, Conditions, etc.
of all Seeking, the Artist has selected to study Beauty.
of all Artists, the optical Artist has selected to study Beauty and to express Beauty } through the channel of the Eye.

Show—

That Beauty will necessarily have a

3	Emotional
2	Intellectual
1	Material

} Aspect, rising relatively as Life Force rises and evolves.

Thus the grain of the rosewood or mahogany body, to our piano, contains such attractive records of the life progress of Nature, in its fibers; and such clear revelation of her way of working, moving and achieving in early vegetable realms, that we polish it and call it "Beauty-full."

Then the interior mechanism of the piano, its chords, keys and attachments, may be so

intelligently formed, measured and arranged that we perceive the admirable plan, order, proportion, adjustment, and call this also "Beauty-full."

Finally, the musician sits down to the piano, awakens its latent harmonies, and pours out through its agency his finest sentiment and inspiration, and lo! we reach Emotional Beauty.

SHOW—

That the MATERIAL aspects of Beauty are generally acquired, directly from Nature, during the long years of childhood, before coming to the art school.

The INTELLECTUAL aspects of Beauty are to be acquired, most properly, during school, from the teacher who has had to be taught them himself, and who so conveys onward the technical traditions, experiments and discoveries of the preceding centuries, as his special profession; and that this is the true service of a good art teacher and art school.

The EMOTIONAL aspects of Beauty should be largely developed by the student's own self, after the art school era; and just as in the case of one's own affections, aspirations and ideals, they should be the *free* choice of the student's own will, the spontaneous expression of his own spirit, temperament and individuality. For so alone will they have freshness, flavor and revelation, and will avoid becoming the reflex of the varied temperaments he encounters.

SHOW—

The mystery that—while the minutest germ contains the entire Intellectual and Emotional formulæ which are to convey and express the distinct Individuality, Sentiment and Beauty of every rose, or lily or other flower—yet there is a carefully observed Principle of Order and Sequence in these stages of manifestation, from lower to higher attainments. And this is as true, also, for a race, a nation or an individual. That, as Christ averred, "the kingdom of God" (including earthly civilization) is "as a seed cast into the ground" and springing up by special steps, or stages,

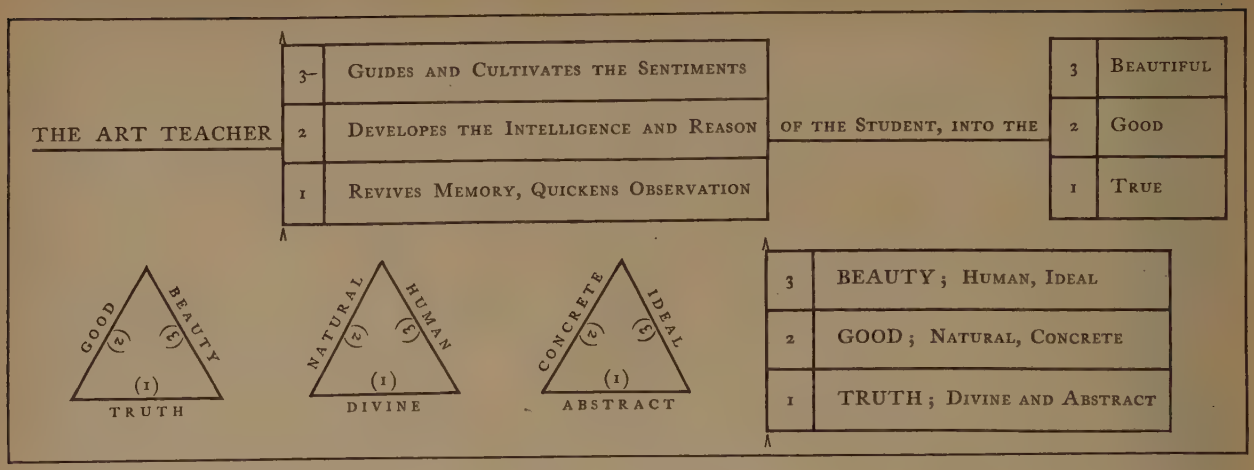
"First the BLADE" (or structural and supporting elements),

"Then the EAR" (or protective and nutritive elements),

"After that the FULL CORN" (or culminating and perpetuating elements).

And so it must be with every wholesome life and work.

Optical Art is one of the most interesting of civilization's branches; and has, from itself, many historic twigs or scions that are full of precious fruit.


THE ART TEACHER
3 Guides and Cultivates the Sentiments
2 Developes the Intelligence and Reason
1 Revives Memory, Quickens Observation
of the Student, into the
3 Beautiful
2 Good
1 True
Good (2) Beauty (3) (1) Truth
Natural (2) Human (3) (1) Divine
Concrete (2) Ideal (3) (1) Abstract
3 BEAUTY; Human, Ideal
2 GOOD; Natural, Concrete
1 TRUTH; Divine and Abstract

LESSON AND CHART III.

Let the Teacher Show—

That the legitimate work of the true Art Teacher is

1st. To Revive the Memory, and to Quicken the Observation of the Art student, so as to secure the data and the physical basis, in the Art student, for

2d. The Development of his or her Intelligence and Reason in Esthetics; and

3d. To Guide and Cultivate his or her Finer Sensibilities and Sentiments,

along the line of { The True, / The Good, / The Beautiful, } which are but manifestations of the Same Divine Life.

Show—

That Abstract Truths are the spiritual Germs and Causes of the Good and the Beautiful, and should be clearly explained and exemplified at the commencement of school work, so that the Intelligence and Feelings of the student should not be left stagnant, nor the hand paralyzed thereby, to grope blindly and mechanically over the external shell of things. The Mind and Heart must be alike quickened, illuminated and inspired by a Spiritual Leadership, seeing deeper than the superficial shell of things, or there will be no true Art Growth; and only a torpid hand will follow a torpid eye—the true and inward eye-of-the-soul not having been awakened!

Show—

That "the things which are seen [with the outward eye] are temporal [and temporary or fleeting]; but the things which are *un*-seen [with the outward eye, but *per*-ceived and comprehended by the Inward Eye] are eternal."

Schools, teachers, manifestations, earth herself, change, but Divine Principles never change in essence, however infinitely their applications may be varied.

That the whole course of Nature is a steady revelation of DIVINE PRINCIPLES—in All Phases of LIFE.

The germ of every flower, for instance, contains in its infinitesimal bosom an ABSTRACT PLAN and IDEAL, latent, and implanted, from the great CREATOR. His Intelligence, Purpose and even Sentiment is there condensed miraculously, and is ready to become revealed the moment that the appropriate Chemic Principles are brought into association with Esthetic Principles by the act of planting. Then LIFE will suddenly advance, evolve and manifest itself anew; taking up and revealing its Principles, by the numeric, metric, formal and distributive BEAUTIES inherent, together with the special Individuality, Character and Poetic Sentiment appropriate to each special flower.

That while the observance of chemical and mechanical principles may conduct forward and distribute FORCE, and life be given alike to wolf or lamb, to evil or to good,

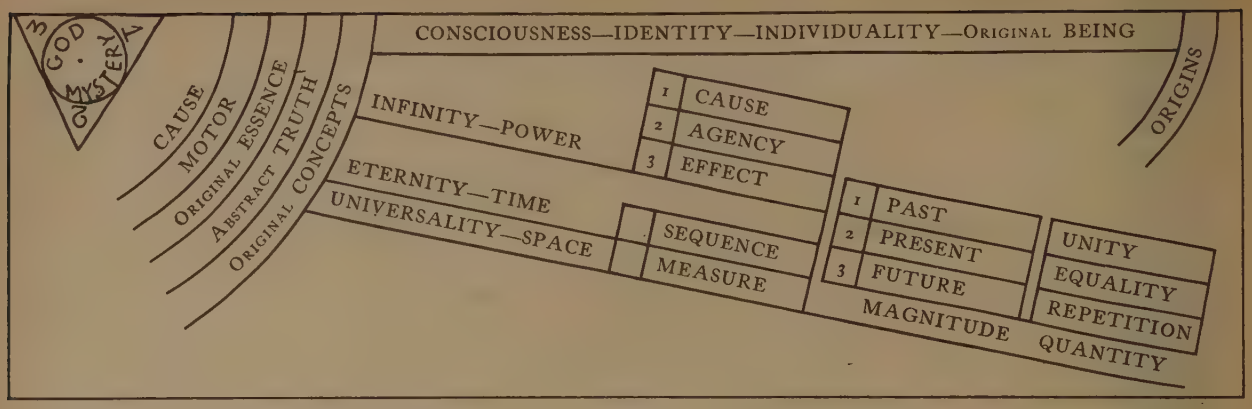
Yet the observance in the life, of { Scientific and Logical Principles, constitutes essential REASON;
Ethical Principles, constitutes essential GOOD;
Esthetic Principles, constitutes essential BEAUTY.

SHOW—

That the Soul must look *within itself* for those deep, divine, yet abstract Principles of TRUTH, divinely suggested by research, intuition and inspiration; approved by sound logic and reason; recorded as science and committed to the keeping of sensitive Conscience.

That the soul must look to the wholesome and sheltering provisions of kind Nature (as the expression of a mysterious but protective PROVIDENCE) for Concrete GOOD · and to Ethical Principles in Reason and Conscience for MORAL GOOD.

That the Soul looks to the long efforts of Human Nature to discover and embody the latent Principles of BEAUTY, revealed in the Creative Father's work, for Esthetic Ideals and Methods amply demonstrated (we will find) in his work in NATURE; and more or less successfully *re*ëmbodied by man's best work in HISTORIC ART.



LESSON AND CHART IV.

Let the Teacher SHOW—

How, out of the Mystery of Life that surrounds human Spirit on its being ushered into terrestrial conditions, probably the first state it recognizes is Consciousness, extending throughout the body as Identity, and then to self as Individuality (distinct from others, though related). From this in later years it may rise to consciousness of Original Being and God. That thus all art creators and creations are entitled to, and should possess, that supreme quality next to Organic Vitality, of Identity (throughout itself);

and of Individuality (in itself, distinct from other workers and work);

and as far as possible Originality (to person, time, place, etc.)

SHOW—

That as the Spirit of Man becomes impressed by Power; and conscious of Power; and, through the infinity of efforts within and around it, detects (1) Cause, (2) Agency, (3) Effect out of original Motive; so the artist and his Art must show

(1) An original Motive ("motif") as Cause;

(2) The choice of appropriate Agents to attain

(3) Sufficient and satisfactory Esthetic Effects.

That as the Soul becomes impressed with Time conditions in Past, Present, Future (as distinct from Eternity), and as the great Creator works terrestrially by the fundamental principles of Selection and Sequence, so these essentials in Volition and Order of Procedure must be contained in the works of human Art. For, as the poet Milton puts it: "There is a Scale of duties, which for the want of studying in the Right Order all the world is in confusion."

SHOW—

That as every life reveals Spirit and Motive, moving out by Order and Selection from the mysterious and abstract Life back of Nature, in the past, through the concrete but ever transitional forms, of the present, to some equally wonderful purpose and revelation in the future, so the art student should not only search for and acquaint himself with the abstract

esthetic truths and motives contained in the past, but watch and adapt himself to the esthetic needs, conditions and forms of the present; and transmit them to (and even forecast) the marvels of the future. More than this—for the best growth—he should educate himself according to this Sequence and by these stages or steps of Nature. He should obtain, as every living plant does, the abstract realities that, though invisible at first to sense, are perceptible to insight; should acquaint himself with the beauties discoverable in abstract Number, Quantity, Magnitude, Motion, Direction and Relations of the same. He should note the Formulæ, Type Forms and Functions which are afterwards visibly manifested and embodied in every flower or bird, the better to understand and ultimately express their full significance and character. Each art education and art creation should, like a building, have its deep though hidden foundation and inner construction, before its outer or more optically manifest forms which are overlaid.

The Japanese greatly delight in, and extract great beauty from, these abstract relations of Number and Geometry; and, indeed, in all past arts and ages they have been held sacred and symbolic. It has resulted that from among them have been selected certain abstract "type" Forms and "type" Relations which, to thoughtful and philosophic artists, become preëminently wonderful and suggestive as the standards from which all others are derived. Of these we give samples elsewhere.

Every true work of art, like a true growth of nature, should manifest in itself, when completed, a combined power and beauty resulting from the organic union, in itself, of truths that are abstract, traditional, and preparatory; then others that are concrete but mediate; and finally others that are idealistic, suggestive and spiritual.

LESSON AND CHART V.

Let the Teacher SHOW—

That man learns to recognize, that if his race and the earth he inhabits were engulfed in some sun vortex, still there would exist throughout heaven the same eternal conditions and properties of Number, Quantity, Space, Position, Motion and even Matter—responding to the Spirit's questions, "How many?" "How much?" "How large?" "Where?" "Whence and whither?" with even the added query "What?" And that, as the Human Spirit is part of Universal Spirit, its operations—physical, intellectual or emotional (hence esthetic)—must be conditioned by the above elements and must give every just consideration to their influence in esthetics.

That Chaos or Confusion is abhorrent and even painful to the soul, the wild forest being from earliest days a symbol of horror, and the studded vault of stars, shot with irregular meteors, being a source of terror and irrational fetish till intelligence progressed sufficiently to detect and so gain peace from discovered Order and Regularity. (Each growing child renews this mental experience.)

SHOW—

How the soul finds in Unity the sense of Repose, Simplicity, Strength, Concentration. That by a necessity of its spiritual being, it will seek, and should find, in Unity, rest from confusion of interest. But (by a similar law which *balances* life and happiness between rest and action), the soul will suffer from a sense of monotony or bleakness if Unity is too long and too strongly enforced. The soul will then find its way back through Duality to Multiplicity (or Variety), and so back again to Unity, till it obtains Variety-in-Balance-and-Unity as a permanent source of pleasure.

How the savage, ignorant of astronomy, while gazing at the chaos of yellow star-points in the blue sky, might become conscious not only of time-unity, in their existence and interest; space-unity of the blue plane, in which (apparently) they stood; then of unities in magnitudes, distances, relations (as in constellations); in inclinations and directions (as where the "pointers" of the Dipper point toward the Pole star); or unity-in-motion (as where nightly the Dipper circles around the Pole star); and by extending the comparison to earth, find unities in circular, elliptic or crescent Forms; blue, roseate or yellow Colors; and, at length, earth's own unities of substance, texture, function, character, sentiment, etc.; and at last the vaster unity of divine laws and Design. He might even see, in the sky itself, that beautiful esthetic principle of *Dominant* Unity, "repose, simplicity, strength," concentrated in the controlling Sun; then carried over to, and *bal-*

anced by, the subordinate Duality and Contrast in the Moon; then *dispersed* through the well-proportioned Variety of the Stars—surrounding and offsetting both sun and moon.

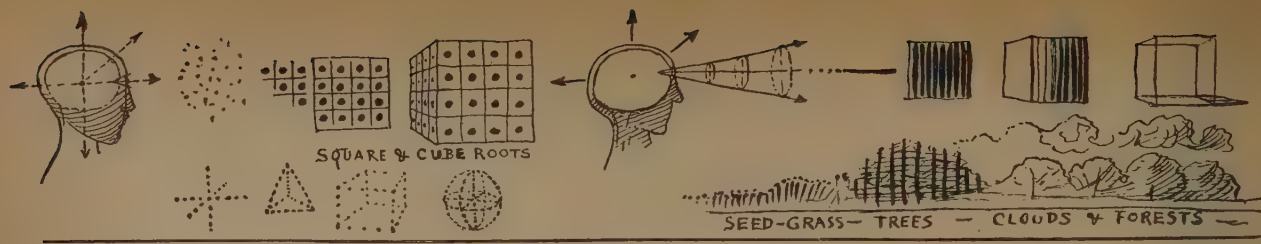
SHOW—

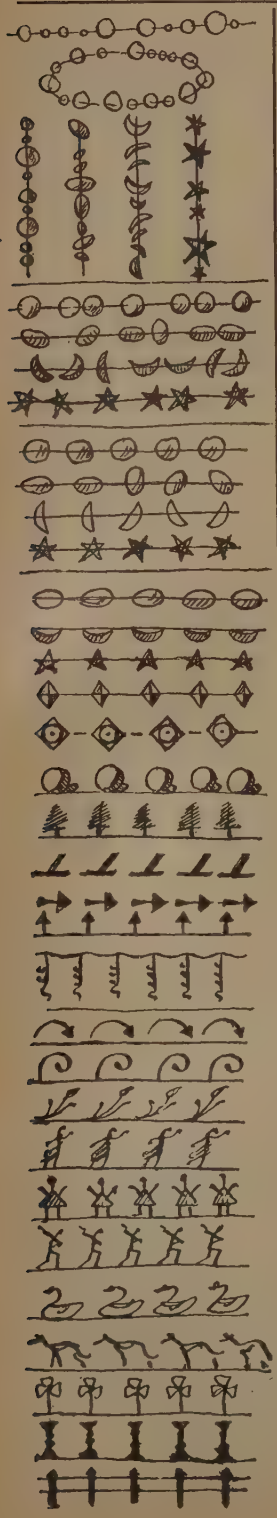
How Duality, while it awakens new interest, divides that interest between its two objects; the mind and eye flying back and forth between them. Yet, if the element of unity is retained in them (as by *common* magnitude, direction, motion, plane, color, form, character, sentiment, etc.), then the eye and mind find increased interest, and the esthetic value of the units is fortified. Thus, a face is far more beautiful for two eyes than one—even if that one were in the middle of the forehead, and equal in magnitude to both combined. And so two gate posts or two door columns, bound by the unity of the lintel, arch or capstone, lose some of the commanding dignity of the single column or obelisk, but gain in interest.

According to circumstances, two may also convey the idea of Contrast or Opposition. For instance, if Unity is kept in form and color, but magnitude, inclination or apparent motion differs, then the sentiment of Contrast is at once awakened; and, in each case, the eye and mind sway between the elements till the Dominant magnitude, motion or color is found. Thus, according to clearly comprehensible laws and conditions, the sentiments may be esthetically awakened of Control, Subordination, Contrast, Opposition, Dispersion, or Concentration back to Unity.

SHOW—

How Three or More produce the idea of Variety and Richness, which may become Complexity and even Confusion unless balance and unity are established, and unless sufficient system and coördination enter to impress the observer with Unity in the motive, treatment, light, action, etc.





LESSON AND CHART VI.

Let the Teacher Show—

That the Soul may be conceived of as Thinking outward from the Center of the brain to Infinity—though incapacitated by earthly limitation from thinking absolute infinity or eternity. But, from conscious Unity in itself, the Soul can conceive of the addition, multiplication and division of its units, *i. e.*, of Abstract Number with its properties and processes; (and this irrespective of the notions of order, direction, size, form, etc., in which the units may be taken, and which may or may not be associated.)

Show—

That in the same way the Soul may conceive of Space inside as well as around and outside of itself—thinking from the center of the brain to the confining skull, through and beyond it in all directions into infinity. Into this Space it may project, abstractly or concretely, its concepts of

Number—(separate)—in "so many" units.

Quantity—(continuous)—as "so much" of any agreed unit as a standard of Measure, (as quart, pint, etc.)

Space—(extensive)—as "so large"—of any agreed unit, as standard of Magnitude, (as inch, yard, etc.)

Which Space Unit may be considered as extensive, { in one direction, for Line; in two directions, for Surface area; in three directions, for Volume.

Man has established, from convenience and necessity,

Three Standards of Reference in { — Length, + Breadth, ∗ Thickness.

The standard Angle is the Right Angle—reflecting itself around its center, in three planes equidistant at 90°; of which planes two (the perpendicular and horizontal) are again Standard relative to earth's center.

The artist may think of units in

{ Lineal Series—as pearls on a string,
Surface Series—as spots on a leopard,
Volume Series—as flowers on a bush, or in cluster.

He may conceive (even abstractly) of { Units brought so close together as to appear Lines; / Lines brought so close together as to appear Planes; / Planes brought so close together as to appear Solids.

(Exemplified in Nature by grasses, leaves, trees, etc., optically blending as in the accompanying chart.)

He may conceive (even abstractly) of units of line, surface or volume *arranged* for practical or artistic purposes in various definite forms or patterns.

He may conceive, by help of imagination, entirely new forms or combinations, such as may never have been concrete on earth, but yet fulfill all necessary artistic conditions and principles (as the romancer does his fairy tale, or Michael Angelo did his Sibyls and Angels).

These may afterwards be associated with matter concretely, and worked out therein—

The same idea remaining beautiful in many embodiments and in many materials, (as where the same conception of a beautiful bureau may be worked out in oak, cherry, maple, etc.)

SHOW—

That the Arrangements of Units in Series becomes more and more agreeable to the spirit, and hence to "the eye," as we see the principle of Unity extend itself over the elements involved (as indicated in Lesson V., and to the degrees there explained).

Thus, as our marginal illustrations show, if we take three symbols for the celestial forms dominant in the sky; as, for instance,

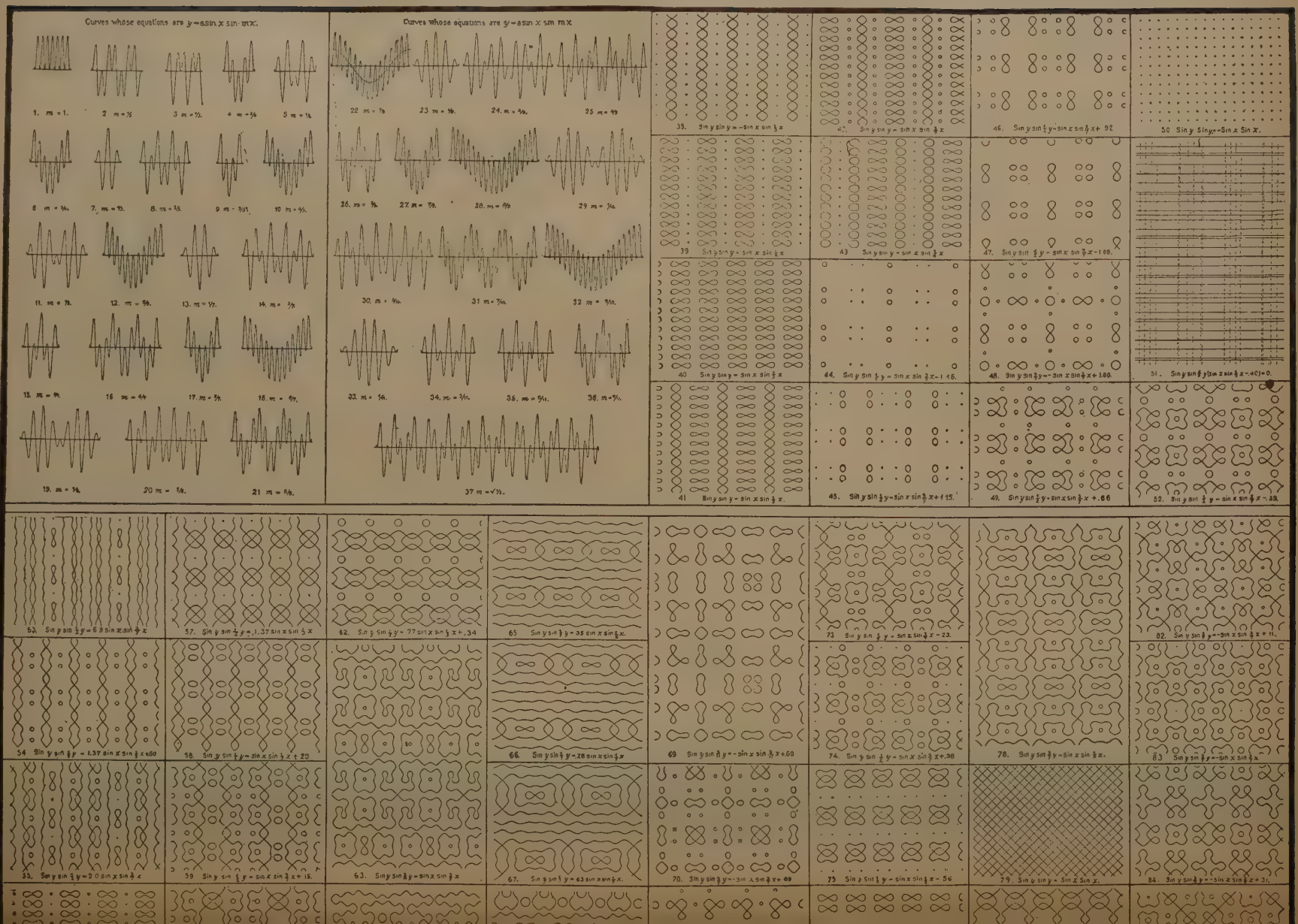
{ The Sun = a Circle, / The Moon = an Ellipse or Crescent; / The Star = a Star:

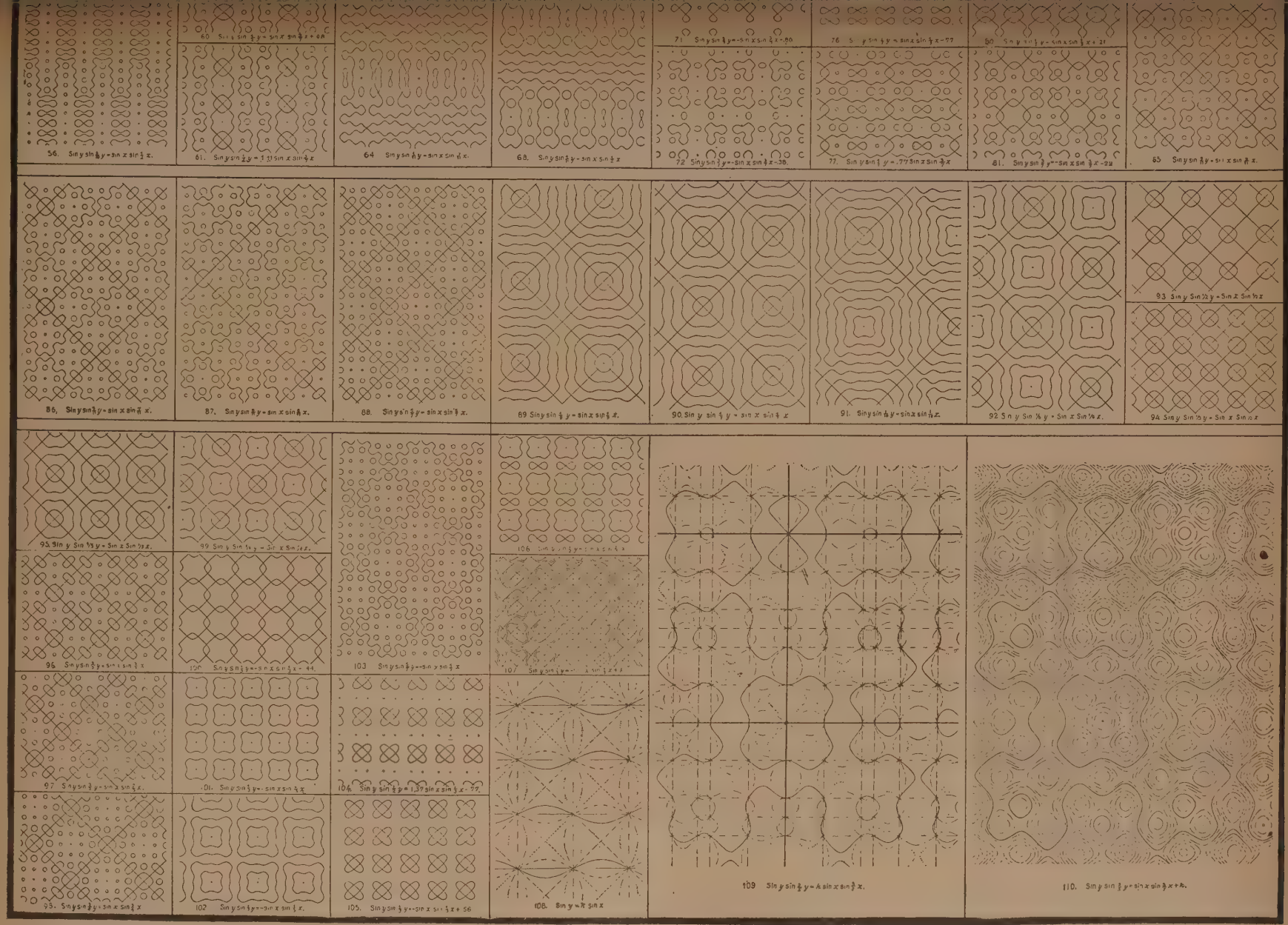
If we introduce, 1st, the element of unity by Line Attachment, as in the savage's bangle;
2d, the element of unity in Size or Color, as in pearls or gold coins;
3d, the element of unity in Distance, as roadway lights or fence-posts; and
4th, the element of unity in Direction (of the individual units' axes)—

a steady increase is gained in the sense of Order out of chaos, and the first great law in concrete life, as well as of ornamental pleasure, is obtained, of Regularity, Uniformity, and Repeat.

The experimental units may be almost what one wills—humble or noble, simple or complex—so long as they embody Principle; and though they may be associated with concomitants of color, light, texture, inclination, tendency, motion, type, standard, sentiment, character, they will still awaken the Sense of Beauty.

CHART VII.—ABSTRACT MOTION


Curves whose equations are y=a sin x sin mx.
Curves whose equations are y=a sin x sin mx
1. m = 1.
2 m = ½
3 m = ⅓.
4 m = ¼
5 m = ⅛
6 m = ¾.
7. m = ⅔.
8. m = ⅖
9 m = 3/5.
10 m = ⅝.
11. m = ⅞.
12. m = 5/6.
13. m = 1/7.
14. m = 2/7
15. m = 9.
16 m = 4/9
17. m = 5/9.
18. m = 6/7.
19. m = 1/8.
20 m = 3/8.
21 m = 5/8.
22 m = 7/8
23 m = 1/9.
24. m = 2/9.
25 m = 4/9
26. m = 5/8.
27 m = 7/9.
28. m = 8/9
29 m = 1/10.
30. m = 9/10.
31 m = 7/10.
32 m = 9/10.
33. m = 5/6.
34. m = 3/11.
35. m = 5/11.
36. m = 7/11.
37 m = √½.
33. Sin y sin y = sin x sin ½ x
42. Sin y sin y = sin x sin ⅔ x
46. Sin y sin ½ y = sin x sin ⅔ x + .92
50 Sin y Sin y = Sin x Sin x.
39 Sin y sin y = sin x sin ½ x
43 Sin y sin y = sin x sin ½ x
47. Sin y sin ½ y = sin x sin ⅔ x - 1.00.
40 Sin y sin y = sin x sin ⅔ x
44. Sin y sin ½ y = sin x sin ⅔ x - 1.46.
48. Sin y sin ⅔ y = sin x sin ⅔ x + 1.00.
51. Sin y sin ⅔ y (sin z sin ⅔ x - .4C) = 0.
41 Sin y sin y = sin x sin ½ x.
45. Sin y sin ½ y = sin x sin ⅔ x + 1.15.
49. Sin y sin ½ y = sin x sin ⅔ x + .66
52. Sin y sin ½ y = sin x sin ⅔ x - .33.
53. Sin y sin ½ y = 6.9 sin x sin ⅔ x
57. Sin y sin ½ y = 1.37 sin x sin ½ x
62. Sin y sin ½ y = .77 sin x sin ½ x + .34
65 Sin y sin ½ y = .35 sin x sin ½ x.
73 Sin y sin ½ y = sin x sin ⅔ x - .23.
82 Sin y sin ⅔ y = sin x sin ⅔ x + .11.
54 Sin y sin ½ y = 1.37 sin x sin ½ x ±50
58. Sin y sin ½ y = sin x sin ½ x + .20
66. Sin y sin ½ y = .28 sin x sin ½ x
69 Sin y sin ⅔ y = - sin x sin ⅔ x + .60
74. Sin y sin ½ y = sin x sin ⅔ x + .98
78. Sin y sin ⅔ y = sin x sin ½ x.
83 Sin y sin ⅔ y = - sin x sin ½ x
55. Sin y sin ½ y = 2.0 sin x sin ⅔ x
59 Sin y sin ½ y = sin x sin ⅔ x + .15.
63. Sin y sin ⅔ y = sin x sin ½ x
67. Sin y sin ½ y = .63 sin x sin ½ x.
70. Sin y sin ⅔ y = - sin x sin ⅔ x + .69
75 Sin y sin ½ y = sin x sin ½ x - .56
79. Sin y sin ⅔ y = Sin x Sin x.
84. Sin y sin ⅔ y = - sin x sin ⅔ x + .31.


56. Sin y sin 4/5 y = sin x sin 1/2 x.
60 Sin y sin 2/3 y = sin x sin 2/3 x + 08
61. Sin y sin 2/3 y = 1 1/3 sin x sin 1/3 x
64 Sin y sin 1/4 y = sin x sin 1/4 x.
68. Sin y sin 2/5 y = sin x sin 1/5 x
71 Sin y sin 1/3 y = -sin x sin 2/3 x - 80
76 Sin y sin 1/3 y = sin x sin 1/3 x - 77
80 Sin y sin 1/3 y = sin x sin 2/3 x + 21
81. Sin y sin 2/3 y = -sin x sin 2/3 x - 21
65 Sin y sin 2/4 y = sin x sin 2/4 x.
72 Sin y sin 1/3 y = -sin x sin 1/3 x - 38.
77. Sin y sin 1/3 y = .77 sin x sin 2/3 x
86. Sin y sin 2/4 y = sin x sin 2/4 x.
87. Sin y sin 2/5 y = sin x sin 2/5 x.
88. Sin y sin 1/3 y = sin x sin 1/3 x.
89 Sin y sin 1/4 y = sin x sin 1/4 x.
90. Sin y sin 1/4 y = sin x sin 1/4 x
91. Sin y sin 1/5 y = sin x sin 1/5 x.
92. Sin y Sin 1/6 y = Sin x Sin 1/6 x.
93 Sin y Sin 1/12 y = Sin x Sin 1/12 x
94. Sin y Sin 1/12 y = Sin x Sin 1/2 x
95 Sin y Sin 1/12 y = Sin x Sin 1/12 x.
99 Sin y Sin 1/12 y = Sin x Sin 1/24 x.
106 Sin y sin 1/3 y = sin x sin 1/3 x
96 Sin y sin 1/3 y = sin x sin 1/3 x
100 Sin y Sin 1/3 y = -sin x sin 1/3 x - 44.
103 Sin y sin 2/5 y = -sin x sin 1/3 x
107 Sin y sin 1/3 y = -sin x sin 1/3 x + 4
97 Sin y sin 1/3 y = sin x sin 1/3 x.
101. Sin y sin 1/3 y = -sin x sin 1/3 x
104 Sin y sin 2/3 y = 1.37 sin x sin 1/3 x - 77.
109 Sin y sin 2/3 y = k sin x sin 2/3 x.
110. Sin y sin 2/3 y = sin x sin 2/3 x + k.
98. Sin y sin 2/3 y = sin x sin 1/3 x
102 Sin y sin 1/3 y = -sin x sin 1/3 x.
105. Sin y sin 1/3 y = -sin x sin 1/3 x + 56
108. Sin y = π sin x

LINEAL EQUIVALENTS TO MATHEMATICAL EQUATIONS

LESSON VII.

(See Chart VII.)

Let the Teacher SHOW—

That as Number pervades everything—("He telleth the number of the stars," "The very hairs of your head are numbered")—a very distinct character in Beauty depends upon Number.

(We would look very differently if we had as "many" legs as a caterpillar, or arms as an octopus. This we quickly perceive in the many-legged and many-armed idols of Indian temples. The very number of the daisies in the field impresses us quite differently from the isolation and rarity of a century flower.)

Number gives Insistence—forces the Attention, reveals the Intention.

Many bison feeding impress us quite differently from one lone bear; many swallows, from a solitary soaring eagle; the many arms raised, of a congregation or crowd, from the one priest or officer officiating.

And though in all Multiplication, the sentiment of Unity is preserved in the unit repeated, yet we mark the Increase of Interest (up to a certain point) by Insistence, and the consequent Esthetic Law—(derived from Mathematics)—that:

The More impressive the Unit is (from any cause, such as size, interest, complexity, vitality of color, etc.),
The Less do we require its multiplication, in design, to reach the same quantity of effect.

(As would be the case with the strokes of a bell. The stronger the pepper the less of it is needed to season the soup. This should be remembered in decorating our rooms. A small, quiet pattern in wall paper may be often repeated, where a noisy one would distress.)

So too with Volume—in Quantity—as with the "majestic" effect of ocean, distinct from sparkling ponds, brooks, goblets.

Or with Space Magnitudes—in Pattern—as a giant distinguished from a dwarf, shanghai from a bantam, church from chapel.

Or with Space Magnitudes—in Distance—as the close proximity of round units in the pea-pod, distinguished from the separated units on the peacock's plumes.

Here Nature generally shows that wise Decorative Judgment founded in MEASURE. By which she reveals to us the wonderful Principle of Proportion, (or proper-portion) —a larger decorative unit for a larger decorative space; stronger foreground for broader background; etc.

SHOW—

That under this—MEASURE—category, are several considerations of great importance to be remembered later.

Everything terrestrial is seen to have its "proper" Limits;
its "proper" Measure—relative to earth and the objects on her.
its "proper" Measures—relative to itself and subordinated to itself.

Here will ultimately come in, consideration of that great topic of Com-mensuration—
(of which a phase is known as Sym-metry,)
of Meter, of Ratio, of Scale, of Standard, etc.,
(which we develop in Lessons XXVIII. to XXX.)

Science now joins with Inspiration to show us that
the great Creator has veritably "measured the waters in the hollow of his hand, and meted out Heaven with the Span, . . . and weighed the Mountains in Scales, and the Hills in a Balance."

Show—

How everywhere are Equations—numeric, quantitative, distributive;
latent or visible;
in chemic, mineral, vegetable or animal Existence.

Many of them appear retained with rigorous exactitude. How wonderful are some of the concrete Formulæ in chemical and animal Structure! How strange that the tree is so measured to man that its fruit, which feeds him, is high enough for its protection, yet low enough for his attainment. That fingers and toes are so rightly numbered, measured, and located that they best befit and aid him in his career. And so with the parts of every other vegetable or animal. (See Chart XXX., pages 368 and 369.)

These Measures of Nature may be regular or irregular, and, as often occurs, regularly irregular.

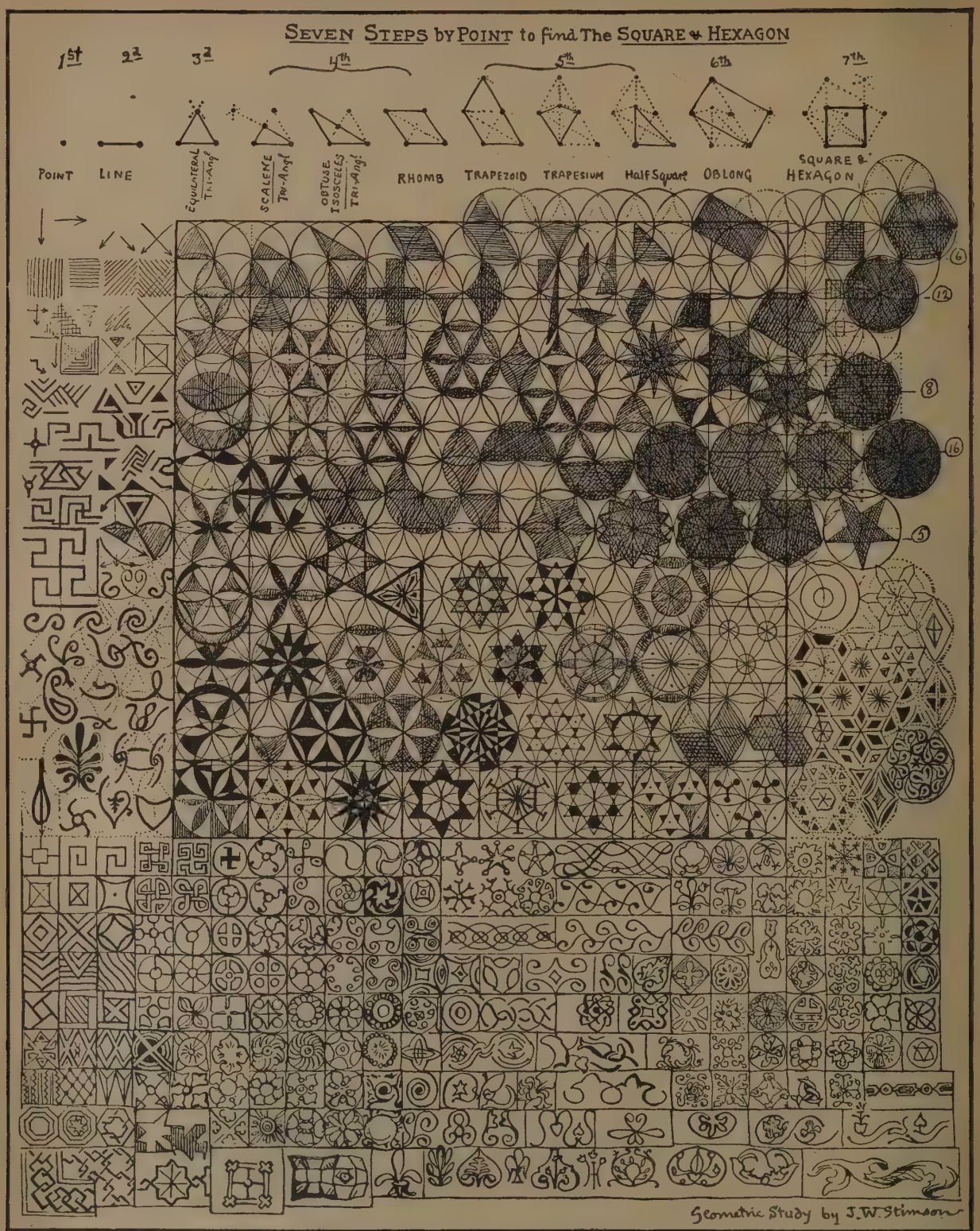
In Ratios which may be ascending or descending, and, as often occurs, both ascending and descending.

By Scales and Standards to which they are deliberately and delicately proportioned.

The few cases where disproportion seems to exist—as in the beak of the toucan, legs of pelican or seal, belly of bullfrog, or eye of owl—are generally explained by their situations and conditions of life—and indeed Nature herself is not above an occasional play with humor and comedy.

In general, however, her constant and delightful display of delicately adjusted Measures is so clear a manifestation of Her Spirit, and so eminent a necessity in Beauty, that this faculty of the student's soul must be early developed by Observation and Practice. *This will bring freedom and strength, and free the student from slavery to plumb-lines and artificial or mechanical props.*

Most wonderful are even the abstract equations of Pure Mathematics and Geometry, as showing that the very foundations of Nature, as well as of All Form and Beauty, are Spiritual and laid in Spiritual Relations—(as the accompanying and later charts will show).


SEVEN STEPS by POINT to find The SQUARE & HEXAGON
1st
2d
3d
4th
5th
6th
7th
POINT
LINE
EQUILATERAL TRI-ANGL
SCALENE TRI-ANGL
OBTUSE ISOSCELES TRI-ANGL
RHOMB
TRAPEZOID
TRAPESIUM
Half Square
OBLONG
SQUARE & HEXAGON
6
12
8
16
5
1
Geometric Study by J.W. Stimson

LESSON VIII.

(See Charts VIII–(*a*)., VIII–(*b*). and VIII–(*c*).)

Let the Teacher SHOW—

That the Human Spirit has the power of abstractly conceiving and considering *any* positions, relations and arrangements of points, in space, that it will—whether conceived as within the narrow limits of its own human skull, or beyond and about itself, out into infinity. From earliest ages Mind has delighted to so image and study these abstract Relations of points, with their ideal lines, angles and planes, independently of material substance.

That these powers and properties of Space mensuration and comparison, which we term Geometry, lose nothing of their certainty, reality, and beauty from the fact that earth supplies no perfect concrete duplicates of them, from which they could be inductively derived; or that our ink lines (of what we term "perfectly" straight, square, or circular diagrams) are, under the microscope, very irregular and imperfect.

That these material expressions are but convenient pictures to symbolize the more truly *real* perfections of the intellect. Trigonometry, astronomy, and even practical physics live and grow upon these spiritual perfections and powers (in spite of all physical imperfections or obstructions). The orange, egg, or pupil of the eye may be but imperfect suggestions of the true sphere, ovoid, or circle, on which they are planned, but their being only approximates to their ideals does not invalidate the perfection of those corresponding psychical IDEALS, nor the certainty of the charm and infinite mystery which belongs to them.

It is well, therefore, for the student to *practice* and *experiment* with these beautiful geometric relations, in order both to stimulate his imagination, and to test his own conceptive and composing faculties, in contrasting, checking, balancing, overlapping, and correlating them, in every possible way—first with instruments and then by "free hand," and lastly with the Principles of art composition that will be explained and exemplified as we proceed with our lessons.

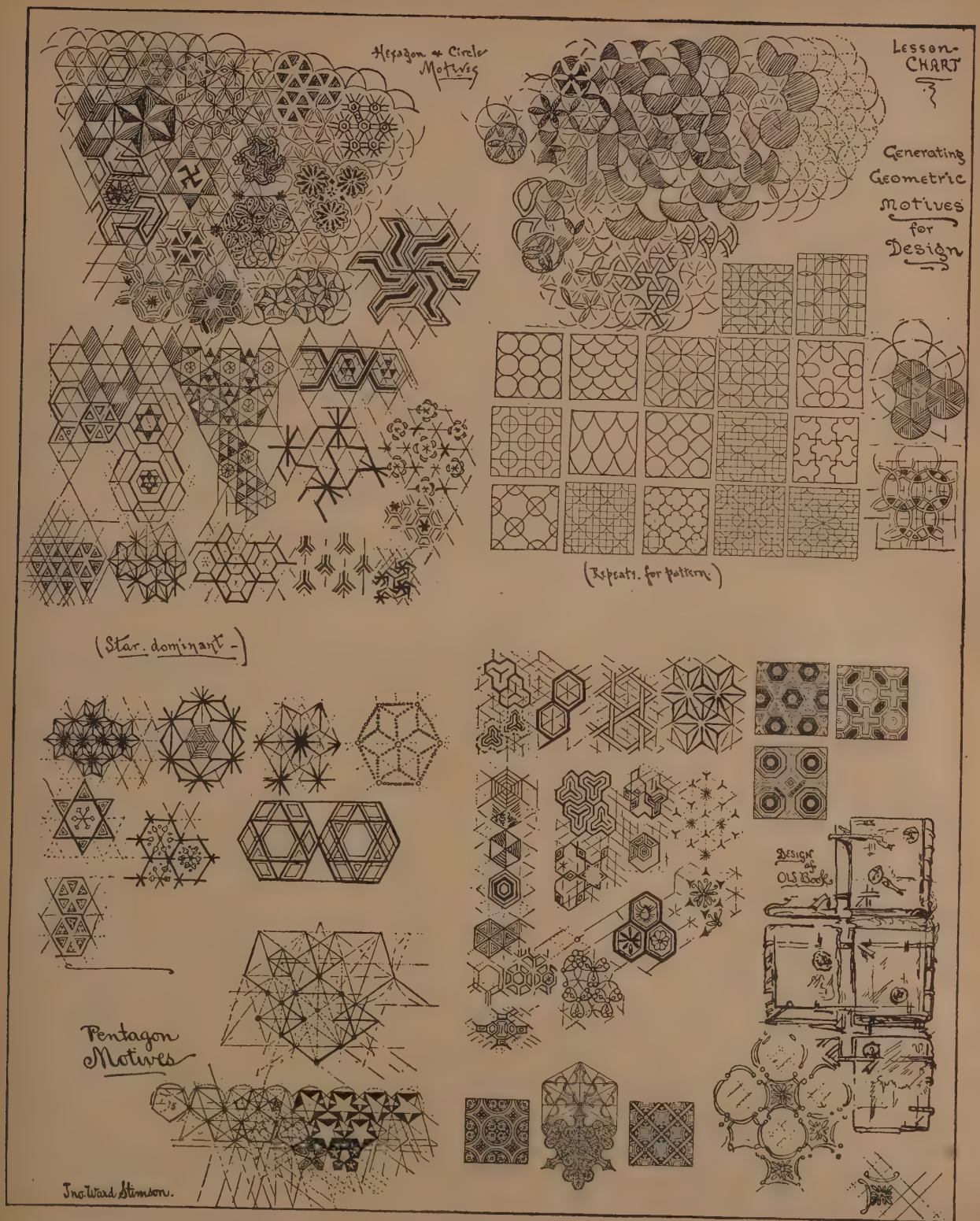
The Oriental fancy has been wonderfully prolific in these germinal and suggestive figures, which, indeed, underlie all the beautiful art of God and man; and students should study the great masters of it in Japan, India, and Arabia.

The accompanying charts are simply starters for the Inventiveness of the young—to give a few steps and motives from which endless combinations may be generated; and without anticipating the explanations to follow shortly *why* certain figures have a peculiar individuality and charm, and a marked decision of effect, in proximity or combination—due to what is scientific as well as esthetic law.

In the chart of my preceding lesson (which is a diagram of lineal equivalents to purely mathematical equations) a principle of very great moment must be noted—that not only are they beautiful by the law of "regularly repeated" and "contrasted" units, but the esthetic impression of MOTION is generated upon the eye and brain; rhythmically first, then swerving, breaking, straining, controlling, combining, and at last composing harmoniously—or playing freely about centers of control, and within limits and conditions of *pleasant* composition.

CHART VIII–(*b*).

GENERATING DECORATIVE MOTIFS


Hexagon & Circle Motives
Lesson-CHART
Generating Geometric Motives for Design
(Repeats for pattern)
(Star dominant)
Pentagon Motives
Design of Old Book
Jno. Ward Stimson.

LESSON IX.

Let the Teacher SHOW—

How the smallest conceivable unit of Space (termed Point) may, by Spirit, be given Position *anywhere;* and relative to Spirit's Self, may be within, without, before, behind, under, above, beyond itself.

Man does not know "where" in Space he or his earth is—but relates both to steadier stars;—nor whether "within" God or "without," "beneath" or "beside" Heaven, etc.,—(these terms being relative to other centers—man's spirit being only a "center" to himself on this star).

But, as Mr. Emerson explained, "Mind is the magnet to find mind, and character to find character"; or, as St. Paul explained, "Spiritual truths are spiritually discerned," so man's spirit "discerns" everywhere Universal Plan and Law as spiritual manifestations, and reverently concedes the seer's truth that God fills the immensity of space with his presence; in him and for him are All Things!

Still more deeply Man feels Mind's mysterious and intimate relation with Omnipresent Soul, when, out of infinite or infinitesimal Space (far beyond vision in delicate gases, chemic solutions and protoplasms), rise into the range of sight, nebulous worlds, minerals "accreting," organisms "growing"—myriads of Embodiments of Divine Ideals with persistent, consistent and logical Relations (numeric, quantitative, distributive and formal: perhaps dynamic, structural, functional; or highly vital, intellectual, emotional); and he discovers that he can (somewhat like God) summon from the infinite depths of human spirit endless kindred and wonderful Ideals, with kindred Relations.

And though he cannot add (save to his organic child of flesh) that Vital Spark which gives independent existence by growth, still to the children of his Intellect he may give such definite Form, Beauty and even Substance that they become tangible and visible and possess a certain spiritual Life in vitalizing other spirits. Still better, he finds his spirit capable of discerning and being inspired by Motives, Principles and Methods manifested in the creations of the Divine Artist, and so capable of remanifesting the same and of incorporating into mere human creations a kindred fascination and immortality.

Indeed, right here in this susceptibility to Spiritual intuitions and inspirations consists Genius—as the iron needle athwart the magnetic current is "dead," but, swinging into line, is "polarized" and can then polarize other needles. In this susceptible response to Divine motives, principles and methods, consists the power of seer, poet or artist. *The measure of Divine pressure upon him is the measure of his Genius!* Herein seems to lurk the secret origin of Force itself! For once granted the mystic formulæ of Eternal Mind, which all space contains, then, by a cosmic consensus in harmonious spirit, every fraction of itself obeys, even to that which may be a lower condition of itself (humanly termed matter). All of this matter, which within terrestrial compass is termed physical and atomic, moves to the impress of immanent Intellect and Will (stupendously reasonable and resistless); and (according to the influx and susceptibility secured) therefrom would seem to arise the ratios of motive energy,—whether known as chemic force, vegetable vitality, animal will, human reason, moral choice and volition.

Therefore Life appears to be the distributed vital energy of the Divine Spirit

Entering { (Perfect) Celestial, / (Im-perfect) Terrestrial, / (Purgatorial) Infernal, } Conditions and Relations { according to degrees of Spiritual Consensus. }

Divine Art appears to be the introduction into Life of

Perfect { Physical and Spiritual } Conditions and Relations } for Cosmic Expression of Divine { Imagination, Sentiment, Principles, Motives, Methods.

Natural Art appears to be the (more or less) Perfect embodiment of these { Conditions and Relations } Terrestrially, and Apart from human agency.

Human Art appears to be the (more or less) Perfect embodiment of these { Conditions and Relations } Through human agency, and With added limitations of Personality in the agents.

{ Divine, Natural and Human } Beauty appears to be the Perfect embodiment of Perfect Ideals, appropriately relative to special time, place, circumstances, materials, etc.

Every gem, bird, flower or child has clearly, in embryo, a divinely Artistic Ideal and Concept, which it holds fast (and which time does not destroy, however it may appropriately modify to environments), and which it is the law of its life and well being to approximate. These ideals seem ever based on numeric, geometric and distributive Relations of special fitness and significance, which constitute Form-Reasoning and Formal Art.

Now here is to be noted the important truth that not only is the art of Nature a divine poem, full of interest and delight—a Cosmic Language which other celestial worlds must comprehend if they too are "made according to His image" (or ideals)—but only in the measure that man puts life, intelligence and meaning into the

Abstract and Concrete { Lines, / Surfaces, / Solids, } which his imagination creates and collates, can man's art have beauty and significance.

Good Form implies good formative Ideas and Ideals.

LESSON X.

Let the Teacher SHOW—

From the "shape"-less Forms of chaotic dream, nebulous fog, smoke, swaying bubbles that are but four-millionths of an inch thick (yet occupy space and are visible to sense), to the definite beauty of the Apollo Belvidere, we have the whole range of FORMAL ART,

Suggestive of { Structure and Motion—by Lines,
Decorative Pattern —by Surfaces,
Organic Functions —by Solids.

All expressive or insipid—in themselves and their combinations—according as the artist's spirit is potent or impotent. They take measure and meaning from the mind that makes them.

Art Education must always commence with Spirit, therefore—even as life commences with germ and continues on to material embodiment of the germ ideal.

It should never be mere mimicry of the shell of Nature, nor blind borrowing of technical processes only. Nor does it commence with "technical process" and end off with spirit. Feathers do not grow birds, but birds grow their own appropriate feathers. There is no such thing as good technique without good *spirit first*, for the special spirit of an art work must suggest its own technique and treatment. Ideas and ideals must inspire to effort—meaning must inform matter—sentiment and principles transfuse and ennoble all media. Upon a clear comprehension of this hinges the whole success or failure of life and art, and indeed the whole evolution of a national art, as a nation's life depends on its putting *soul above body*. For, as a great art genius once said, "Expression cannot exist without character as its stamina, and character and stamina can only be given by those who feel them. Inappropriate execution is the most nauseous affectation and foppery." There can be no appropriate "style" till we first generate the thought or the feeling that we are to express.

So, let the art student first conceive an artistic Purpose and Plan, then look about for the most proper Medium for its embodiment, as the germ of a flower seeks appropriate elements in earth to manifest itself. If the inspiration comes from some idea or sentiment already presented by Nature, analyze and appreciate well this "Nature Poem" in its artistic aspects, and viewing it from that side, select the most characteristic for the art purpose, holding these elements simply and saliently. Then select what medium and treatment will best convey these. Rich and pulpy fruits may suggest oil colors; light, transparent flowers may imply water-color treatment. Or, of these, some may be so dainty in form and delicate in texture as to suggest jewelry, glass, or porcelain application; others, more bold and freely flexible, lend themselves to clay and open carving; still others are so current and clambering as to adapt to borders; so aspiring as to go with panels; so formal and flat as to suit floors and wall surfaces.

Let us always feel and see the Spirit (of God or man) in our art—for Nature plus Human Nature is Higher Nature, and wherever these appear, in any material, we alone have high art; for the aristocracy does not depend on the medium, but on the *spirit* in the medium. In all good and perfect work there will also be a certain spirit of the material preserved, which is its essential sentiment (implied in its textures, properties, limitations, etc.), such as hardness and endurance in rock or iron, plasticity in clay,

transparency in glass, preciousness in gold, etc., etc. This we must sensitively guard, as the elements of material substance in Nature are mysteriously connected with the very ideals they are to convey—a truth beautifully announced by the sacred poet long before modern science confirmed it, "Thine eyes did see my *substance*, yet being unperfect; and in Thy Book all my members were written, which in continuance were fashioned, when as yet there was none of them." By the spectroscope we can detect the same terrestrial materials in the celestial worlds above us.

Now, this "continuance," or principle of Continuity (alike in the ideals and the force effecting the ideals), is not only one of the most convincing proofs of Mind and Will back of Nature, but is one of the most fascinating and wonderful facts of art. Certain Ratios and Forms seem to be as immortal as Nature or mind itself. On all sides we see The Creator taking delight in remanifesting certain Type Forms (which also forever delight us), as though they were a DIVINE ALPHABET from which Cosmos itself is derived like an immortal poem or Book of God.

Of these the foremost are { The Square, Cylinder, Cone, Circle, Ellipse, Spiral, Pentagon, Hexagon and Star,

and over them reign, in supreme beauty and significance, those three great primaries, the SQUARE, CIRCLE and STAR, from which all others are derived.

LESSON XI.

Let the Teacher SHOW—

That, to understand the charm and character of these wonderful Type Forms and Primaries, we must recognize the origin of their beauty and style, in the peculiar Relations they present, which indicate remarkable and constant tendencies in the intelligence and will they convey.

As the eminent electrician, Edison, once said: "Life I regard as indestructible. Every atom seems possessed by a certain amount of intelligence from God. In harmonious and beautiful relations, they assume a beautiful order, interesting shapes and colors, or give forth pleasant perfumes, as if expressing their satisfaction."

These relations and forms seem to please the Divine Mind for themselves (relative to attributes in Himself), for man finds them in spheres and orbits above him; forms about, under, and even within him; and actually before he ever was. As explained in Job, He "causeth the bud . . . to spring forth" in "the desolate and waste ground" where no man is. Space, form, beauty, exist therefore, in Spirit, beyond man or matter, though revealed to man by mind and matter. The human spirit's consensus with general spirit, enables it to reach out indefinitely into space and to locate points (as minute but actual fractions of space) at any distance, and in any relation, we please. We can conceive and perceive these space points extended into lines, surfaces and solids (either by an expansion or multiplication of themselves), and feel our own and other spirits contemplating, measuring or creatively brooding over these space intervals and relations, as St. John saw the angel with the measuring rod over the Celestial City.

But the process itself of extending, measuring, or (like the Spirit over the first waters of life) "brooding," implies Force operative in mind or matter.

Now, the Center of a Form may be considered its germ; its inner structural axes are its skeleton; its marginal surface boundaries give its definite or "apparent" form; but the power itself which measures these relations must be Intellect, and the power which holds its parts together must be Will. The generative and creative power is Imagination, and the materializing power is Art.

Thus are spiritually generated the loveliest divine and human conceptions, before ever they are concretely realized—but they are none the less "real."

Every artistic form—"ideal" or "natural"—from Minerva of the Parthenon to the daintiest humming-bird—must be intelligently viewed as presenting:

1st.—Thoughtful Imagination and Plan in its definite measures and fixed limitations, (numeric, quantitative, formal, etc.)

2d.—Will, in the stress tensions of the original energy, and in the directions of the original energy, (relative to the Center of the activity).

3d.—The individual Coöperation of its parts toward combination from their positions in space (relative to each other).

4th.—The ultimate Result (or resultants) from the equation (or equations) of the angles of energy, Which resultant is its total Individuality and expressive force.

Thus every "type form" and "primary" is found to have organic character and style, (as, of course, must all derivative forms proportionally have, in Nature and true Art).

If, therefore, we consider these in connection with a few primary Axioms of Science, we will discover there are just as clear and absolute Axioms of Beauty,

Thus, the clearest science of the human mind to-day assures us that:

The Universe is of necessity *infinite* in space, time and mass.

Cause or Primal Law is, of necessity, universal and unvariable.

Matter is inert (static); Will alone (dynamic) can move it—for we know matter from space alone by the measure of our *will* which we exert to *dis*-place or *re*-arrange it.

Energy is primordial, indestructible, continuous, convertible (and so known to us as force and motion);

(Normally) proceeding in all directions equally (unvarying in quantity and velocity), from absolute unity to relative units and centers.

(Practically) differentiated, deflected, transmuted to diversities and individualities. Hence action-and-reaction, attraction-and-repulsion, alternation-and-rhythm.

These planes and directions of Tension contain the laws of all structures and forms.

CHART XII.

THE PALETTE OF LIFE

TYPICAL FORMS AND SEQUENT STAGES IN THE ESTHETIC MANIFESTATIONS OF NATURE

LESSON XII.

Let the Teacher SHOW—

That the Universe is an organic Whole; growth being *from within outward*, by a perpetual pulsation and rhythm which begets Evolution.

The highest development of force implies the greatest *freedom* combined with spontaneity in opposite directions. } Attained in Life, (where pulsation is most rapid, with equilibrium of opposite tendencies.)

Force tends to free itself from matter more and more, and *appear* externally.

Hence life-forms divide into two series:

1. Matter dominant over life { Simple, "energetic" crystal. / Complex, "living" vegetable.
2. Life dominant over matter, Most complex, "animate" animal.

Every minutest particle of matter is made *mobile* by the indwelling force.

Life ever implies a constant *return* to the Center of force for a new lease of external existence.

In every finite part of the universe is an ingenerate *bias* from chaos to cosmos.

Each thing can manifest itself completely only by representing its being

1st. In Unity, 2d. In Individuality, and 3d. In Diversity.

The general tendencies of Nature thus apply Energy / through Form / by Matter } in an indispensable *triune* way.

Hence, most beautifully and marvelously, material Nature takes Three Primary Forms and stages of expression, most clearly revealing these primal tendencies and attributes of the spiritual life creating her. They appear to continue in character, motion, and sequence as eternally as the Divine Will continues; thus inevitably impressing us, and enabling us to similarly impress others.

The 1st Stage and Form is that implied in the very directness and "rectitude" of every original line of atomic impulse—showing its individual quantity and intensity of energy, and its obedience to the principle that a straight line is the promptest path—"the shortest distance between two points." Hence (esthetically) straight or "right" lines, forms and movements impress the eye (*i. e.*, mind) with a sentiment of swiftness, purity, penetration, vigor, and, as it were, the dignity and truth of Law. They are eminently masculine in quality. (See Chapter VI.)

When a cluster of atomic impulses have no fixed mutual center, and are contending, as it were, for the fullest measure of individual expression, dominance and "right-of-way," we have, in this competition and comparison,

The 1st Stage of Civilization, for matter and mind, society or art.

In matter it is represented by the repulsion of gases.

As corollary from this we note: that when two directly opposite impulses are equal and simultaneous—the point or atom is in Repose-of-Tension;
when equal and unsimultaneous—the point or atom is in Beat or Pulsation;
when unequal and unsimultaneous—the point or atom is in Undulation and Rhythm.

An oblique angle or curved line inevitably implies Relativity of forces and subordination of one to another standard.

The perpendicular, horizontal, and right-angled relations are terrestrial standards of Repose in tension and equilibrium.

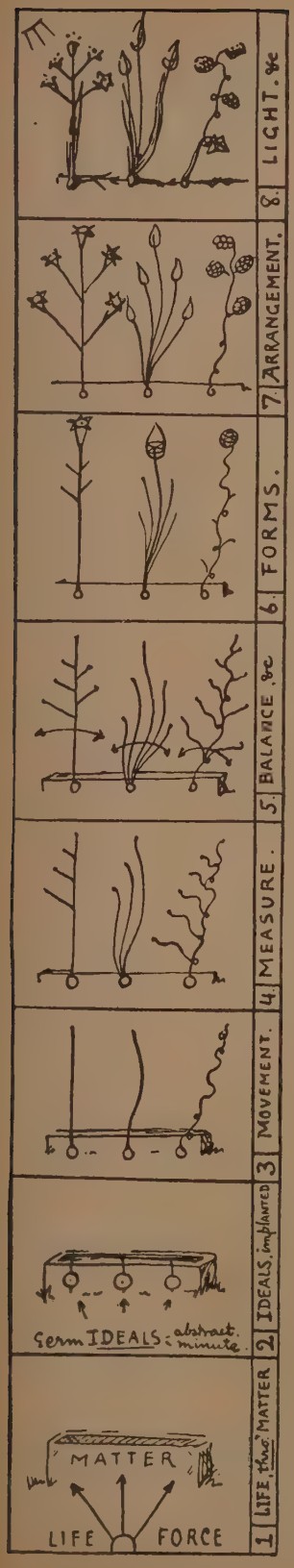
The Perpendicular, or "upright" is (humanly) the most dignified and imposing, as impressing on the mind the principles of rectitude, self-reliance and equipoise (from which all deflection may be measured).

Under this primary consideration we have a quantity of vigorous decorative forms, beginning with the Square.

The beautiful principle of Parallelism, or similarity of tendency, is contained in the sides of the square.

The 2d Primary Stage and Form of advanced relation (alike for matter, mind, or art), is where, between two distinct impulses, one is frankly dominant and controlling (centripetal); the other frankly subordinate and auxiliary (centrifugal); at constant and equal distance. An advanced sentiment is generated of unity-in-duality; of repose-with-action; in just equilibrium. Enough of vigor with enough concession, enough conservation with enough progression, with no suggestion of inner conflict, but a healthful advance from Competition to Coöperation. Then we have generated the superb ("feminine") form of the Circle, with all its multiform modifications and combinations—which in matter is reflected by the passage from the angular tension of gases to the globular and undulate liquids.

In the 3d Primary Stage and Form, of higher combination, by which many impulses are Coördinated and Coörganized in unity and equilibrium, we have the highest (Radiate) condition of matter and mind; and hence the perfect and definitely composite beauties, which become germinal in Nature and possess the power of fructification, fruition and recreation. The transition to this Radiate Relation gives us many beautiful intermediate and secondary forms (oval, elliptical, spiral, tangential, etc.) All of the above are constantly and concretely presented to us by Life, in every diversity, but never lose their essential influence in equations of form and force (with which we must esthetically and socially count). Their correlation or composition, under subsequent principles of Selection, Proportion, Emphasis and Expression, constitute the eternal foundations of Organic Style.



LESSON AND CHART XIII.

VITAL ART DEVELOPMENT AND EXPRESSION

THE GREAT Founder of Christian Civilization once told his disciples to leave the Pharisees and Doctors-of-the-law in their doomed conventional church or temple, and come with him (as "living stones") for a quiet walk (even on the Sabbath day) into the fields of Nature. And stopping them before a Lily, He said: "Consider the lilies, *how* they grow." That is: reflect carefully, by what organic methods and principles, a lily achieves its vital progress. Let us "consider" this wonderful object-lesson of Eternal Life, from foundation upward.

1. We note a Life-Force in Nature, which no man can create, but which lurks latent (an intellectual and emotional power) between the particles of otherwise dead or static matter—ready to use matter as its fulcrum or agent, when conditions of light, warmth and moisture are favorable to its purposes.

2. Whenever a special Germ Ideal (such as the seed of lily, tulip, grape, etc.), containing its own intellectual and emotional formulæ, *opens its life to union* with the Mother life of Nature, her greater life is willing to bring its special individual life on to expression and fruition. Each seed is a condensed divine ideal or poem, perfect and potent wheresoever carried.

3. Under the guidance or incentive of each healthy germ-ideal, the life-force moves forward through mobilized atoms, not only to a concrete Revelation of itself and the germ-ideal, but also of eternal Principles and Methods pursued by Nature throughout her handiwork. Such as logical Order from cause to effect; Continuity and Repetition of effort toward definite result; including definite Direction of Motion toward that result; with space and time Limitation, from beginning to end of the movement (whether vigorous and angular like the Easter lily, graceful and undulate like the tulip, or playfully curling like the vine). Selection also, is shown, of fitting materials to *retain* this progress.

4. Careful relative Measure to meter, involving delicate Proportions to definite standards and ratios of extension.

5. Symmetry and Balance of parts and measures.

6. Form—characteristic and constant for each individual ideal, or completed phase of individual expression; through lineal, surface or solid extension of the parts:—conic, oval, spheric, and other formation.

7. Composition, or arrangement of parts for total effect constituting beautiful Design; and attaining Unity-in-Balance-and-Variety; the sentiment and intellect of God alike shown.

8. Color, Odor, and Texture may still further announce the individual sentiment of each germ-ideal. And finally Light, rising over it in the morning and settling over it at evening, may add a constantly varying play of Shade. While out, of the perfect and completed ideal, ripens a family of her new Child Germs, each containing the immortal Ideal, and capable of perpetuating the Divine Miracle!

FROM THIS we draw the important lesson that Materialism is Death, while Spirituality is Life; for matter is but the agent or medium through which to manifest divine ideals on earth.

That we must, like good guardians, bring these divine ideals (committed to our care) into vital *union* with Nature's willing life-forces, under proper conditions of intelligent Light; affectionate Warmth; and even the Moisture of chastening tears.

We must give them continuous Movement in the direction of the ideal, selecting appropriate material to record and retain the advance. Measure, proportion and properly balance the relative parts. Develop each in order. Evolve and correlate individual and organic Form and Composition expressive of our ideal, and finally give out to others that Color, Fragrance and peculiar Texture which is the exponent of our sensibility toward them and the test of their sensibility toward us.

Lastly under the light thrown upon our work by Heaven, and the peculiar angle of observation of each spectator, let us accept the different "shadings" and "points of view" inevitable, so long as in Heaven's sight we produce and perpetuate Divine Beauty.

What is true of the Art-of-Life is equally true and appropriate for the Life-of-Art, whether optical, literary, dramatic, musical or other.

All material must be made subject to Mind and Emotion for the expression of esthetic ideals and principles.

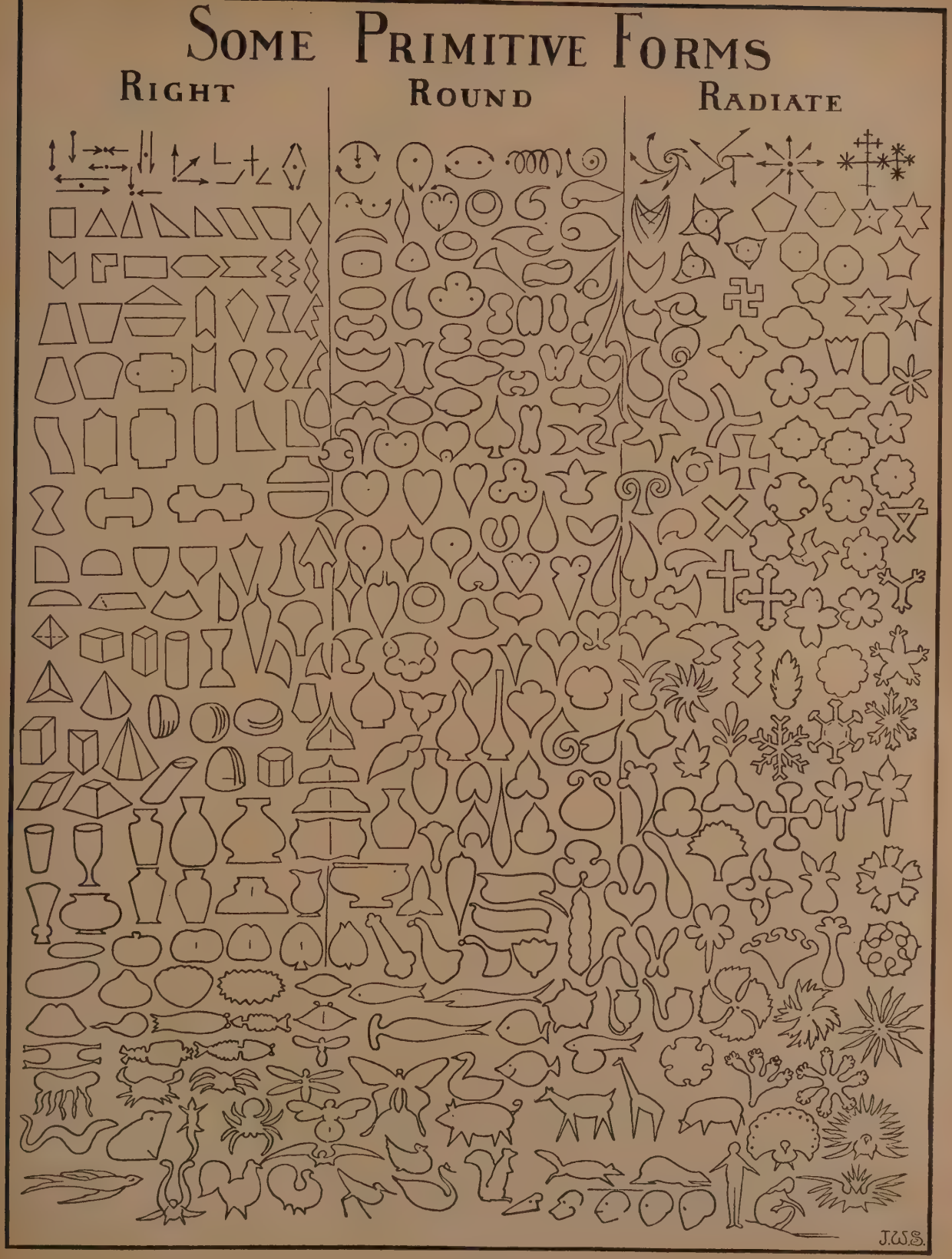
Thus perpetuating ETERNAL BEAUTY.

Materia and instrumentation are nothing until they express the organic Ideality of each individual and nation, and no school is truly an art school, nor method truly an art method, which does not vitally and organically cultivate the Spirit of Beauty, of Nationality and of Individuality before the dead machinery of mimicry, technicality and mannerism.

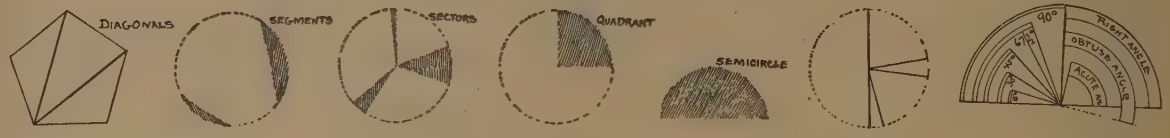
Unless the young, therefore, of America are kept alive, individual, thoughtful and constructive in their education; in deep sympathy with the spirit of Nature and of national character, and keenly awake to the message and beauty of their *own* times and materials, we can never have a fresh, interesting and permanently valuable National Art or National Life.

We cannot acquire this spirit and originality by imitating or importing aliens, but only by cultivating a similar sympathy with Nature and appreciation of Her methods. Our victory consists not in borrowing false plumes, but in assimilating and reapplying the same Immortal Principles.

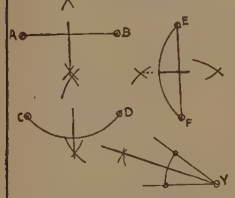
Some Primitive Forms



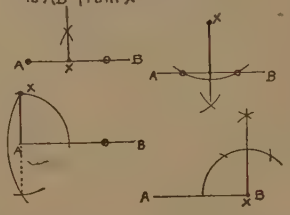
GEOMETRIC QUANTITIES, RATIOS AND PROCESSES



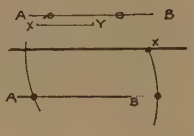
To Bisect LINE-AB
" " ARC-CD
" " CHORD-EF
" " ANGLE-X



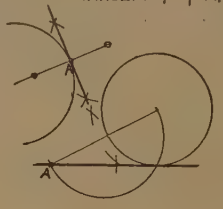
To Draw Line PERPENDICULAR to AB from X



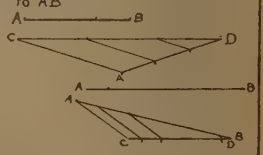
To Draw Line PARALLEL to AB — at distance XY — from X

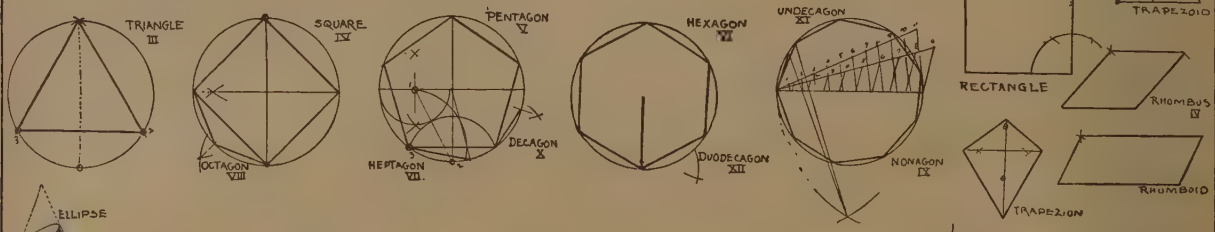


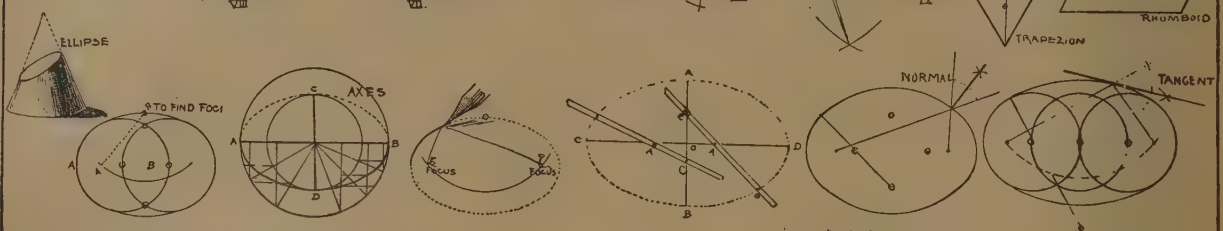
To Draw TANGENT through A.

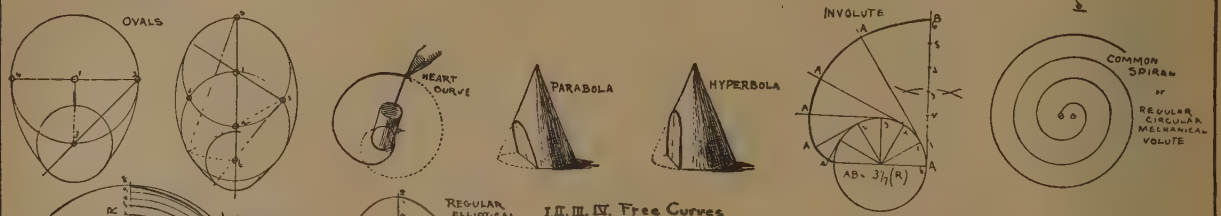


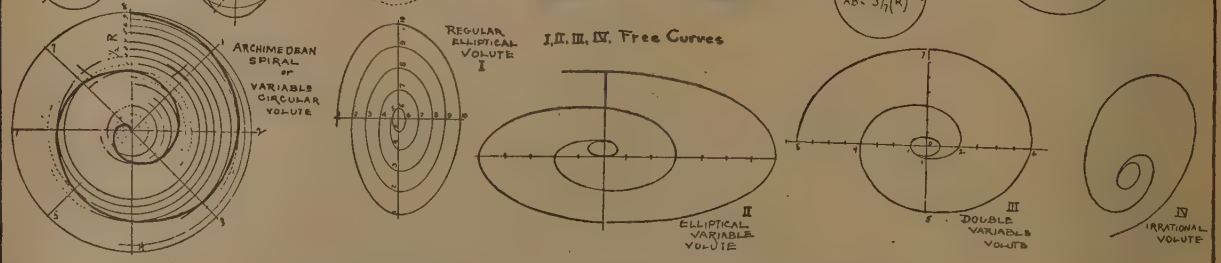
To Divide CD PROPORTIONALLY to AB



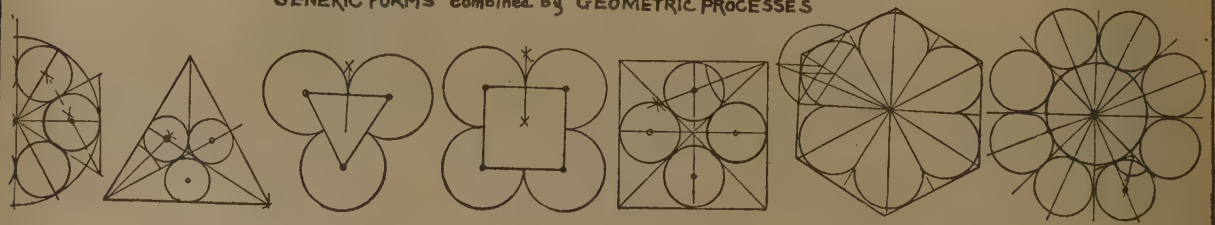







ARCHIMEDEAN SPIRAL or VARIABLE CIRCULAR VOLUTE
REGULAR ELLIPTICAL VOLUTE I
I, II, III, IV. Free Curves
II ELLIPTICAL VARIABLE VOLUTE
III DOUBLE VARIABLE VOLUTE
IV IRRATIONAL VOLUTE

GENERIC FORMS combined by GEOMETRIC PROCESSES



LESSON XIV.

(See Charts XIV–(*a*). and XIV–(*b*).)

THE THREE PRIME (or germinal) Relations, Forces, Forms, Values and Colors presented in Chart XII. may be blended and modified indefinitely by Art and Life.

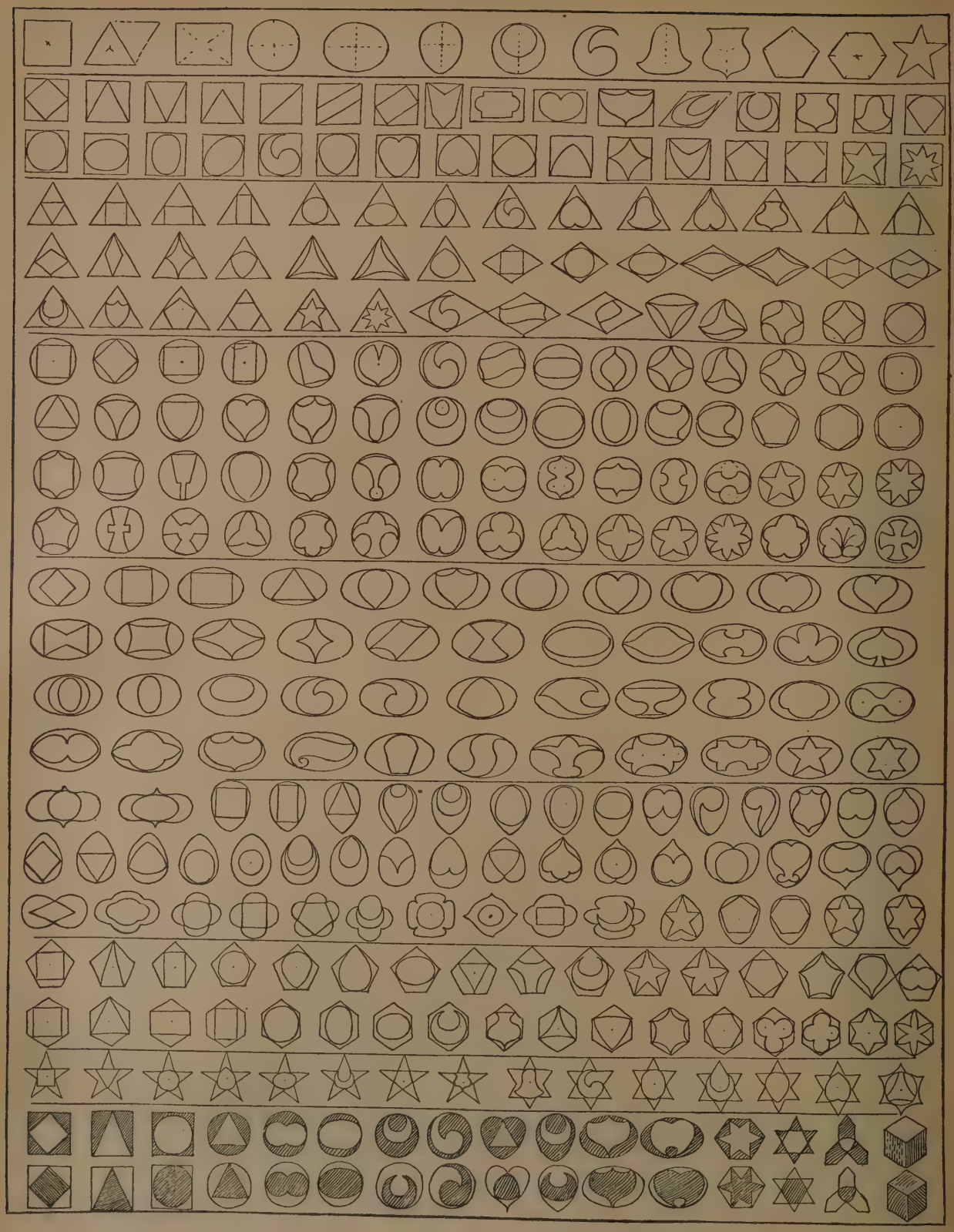
A few of those which come earliest and easiest for the pupil are presented in Chart XIV–(*a*)., and all evolve or develop from the RIGHT-ROUND-RADIATE relations blending and interacting.

All forms, whether in primitive or complex conditions, should be comprehended first in their Internal Structural Life (of centers, axes, angles, measures, motions) before Drawing them, as in Chart XIV–(*b*).

If the student is drawing geometric or mechanical forms, a book on plane and solid geometry should be consulted. If he is drawing organic forms, their vital structure and anatomy should be learned.

The curse and destruction of *true* Art or *true* Education, is the prevalent soulless, senseless mimicry; that is the *superficial imitation and mechanical reiteration of externals*, without perceiving or presenting the Internal Life, organic character and spirit thereof. This fatal error passes into the later life and character of mankind; into its work, worship and worth, in civilization.

The utmost simplification or conventionalization of forms for decoration should still be based on Knowledge and Feeling. Knowledge to possess the best facts of life; Feeling to perceive the best sentiment and significance of those facts and arrangements.



SOME GERMINAL FORMS COMPARED

SIMPLE SURFACE FORMS—MODIFIED, CONTRASTED, EMBELLISHED

LESSON XV.

(See Chart XV)

THIS CHART gives a suggestion of Varied Influences which Forms have upon each other, in Concentric Combination, by Twos.

The student should practice and observe these fully and try experiments of his own for pleasant results; first treating them in line and then in surface; and noting what influence varied values of light and dark, open and closed spaces, contrasted or harmonized colors, present within them. Remembering also that as we approach the white, or light, end of the scale (see Palette Chart XII., page 268,) the forms and colors apparently gain force and size; while in approaching the black, or dark, end they diminish.

LESSON XVI.

(See Chart XVI.)

Extends this Form-Experiment to more complex and familiar forms of shields, flags, and escutcheons of heraldry.

LESSON XVII.

OPTICAL MOTION

(See Charts XVII–(*a*). and XVII–(*b*).)

THE READER will remember that in several preceding charts (see pages 104 and 268,) we have referred to the Three Principal Relations of Force and Form, which supremely interest the artist; and to the constant play of these and their derivatives, noticeable on every side in water, rocks, wind, and animal action. The present lesson calls attention to the various agreeable ways in which the decorator may play with the eye (or more accurately the mind) of the observer. The eye will run rapidly along a line, and seek to follow and to feel its meaning or decorative implications, just as surely as the reader's eye follows a printed line. In the universal language of Art every observer unconsciously becomes a reader of the *intents implied* in the line by the force of will that drove the line, or by the systematic and evident control of one line and form by another, in the composition. For in this artistic Arrangement consists.

We give many examples from the Japanese, because in their dainty and original conceptions, this wonderfully inspired people have always proved themselves such masters of fascinating and gracious Composition—from their most rudimentary to their most complex efforts. And no student can do better than to analyze and catch their delightful play with Principles. They show how much entertainment is possible to the imagination (through the eye) by starting the Flow of Movement in one direction; then imprinting upon it *new character* by new control; and systematically setting its tendencies and resulting forms, in various relations of new harmony or contrast. Some arrangements wander, or spring upward; some are controlled and steadied to unity by latent gravity; some slant, cross or balance; some play about centers of control, implied in the composition or deliberately marked, (with varied distinctness). Some revolve and unfold; some undulate; some radiate; some rise and fall by "crescendo-diminuendo"; some overlap, interlace or meander; some cleave or sever each other's structure. While some, that are deliberately confined or enclosed by associate forms, play and circumnavigate within their boundaries —as goldfish play within a crystal globe.

UPRIGHT
OBLIQUE
ZIGZAG
TO GRAVITY
CONCENTRIC – by
3
4
5
6
ROTARY TO MARGIN
ROTARY TO MIDWAY
AROUND MARGIN
MARGIN AND INWARD
FREELY ABOUT MARGIN
TO & FROM CENTER
FROM CENTER
RADIATE TO MARGIN
TO CENTER

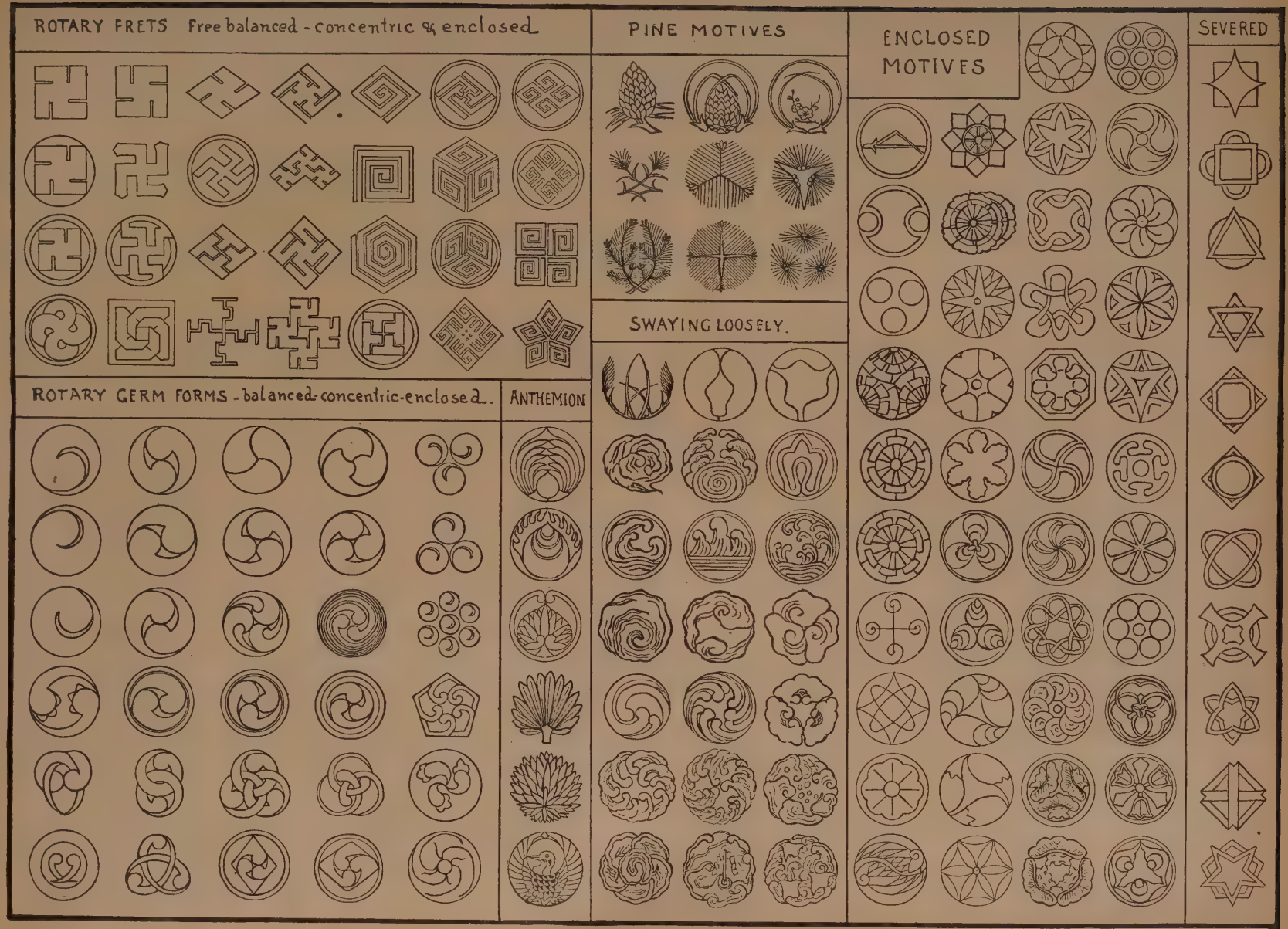
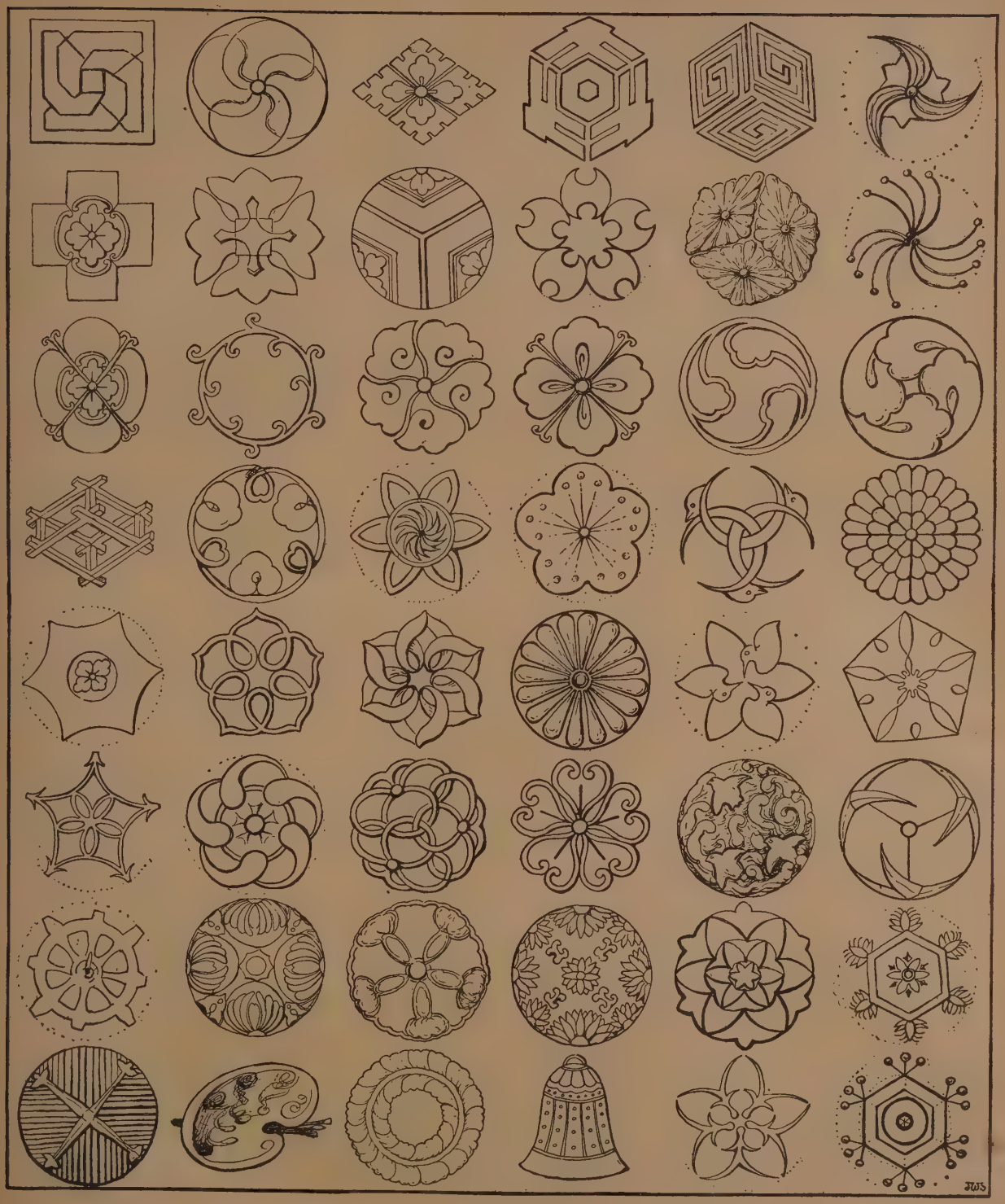

ROTARY FRETS Free balanced - concentric & enclosed
PINE MOTIVES
ENCLOSED MOTIVES
SEVERED
SWAYING LOOSELY.
ROTARY GERM FORMS - balanced-concentric-enclosed.
ANTHEMION

CHART XVIII-(*a*).

SOME FORM-EXPERIMENTS

(Guiding the Eye—Decoratively)

CHART XVIII–(*b*).



SOME FORM–EXPERIMENTS

(Concentric decorative Motifs)

CHART XVIII–(*c*).

SOME DECORATIVE ART–MOTIFS

(Suggested directly from Nature)

LESSONS XVIII. TO XXIII.

ARE A SERIES of practical decorative examples, derived mainly from the Japanese, of the Construction and Multiplication of Decorative Units for Patterns in One Plane.

When the unit of design is regularly repeated in all directions over the surface, for its embellishment and enrichment, it is commonly called, in commerce, an "all over" pattern. Students should notice that in all the examples of this class the whole design is either the multiplication of a Geometric unit, or a unit cast upon a Geometric "Base" or "Underweb," for regularity of multiplication.

In some the Geometric base is clearly revealed; in others it is latent or concealed. This form or forms, played over and across the base, is called the Overlay.

Sometimes in the multiplication of the decorative unit over the surface, the eye is not called in any special direction, but allowed to repose; or is so drawn in opposite directions as to remain practically in repose; in which cases the pattern is considered "static" or stationary.

But in many others a distinct motion or tendency is generated to conduct the eye upward, downward, aslant, or in undulating, revolving, radiating, etc., directions. This tendency of the pattern is called its Set, and has most important consequences affecting the character of the design, and its influence in artistic combinations.

Such tendencies or "sets" in the general effect are often quite unexpected to the novice in design for wall-papers, textiles, etc.,—coming to him in the light of surprises, as he sees his pattern unit (or units) multiplied by the process of manufacture, all over a surface. Hence it is well to study out the effect in mass as well as in unit.

The examples of the series have been arranged by the author in such order and system, from Geometric to Composite and Organic Overlays, as to assist students to see Principles—which should be the teacher's main purpose.

CHART XVIII–(*d*).

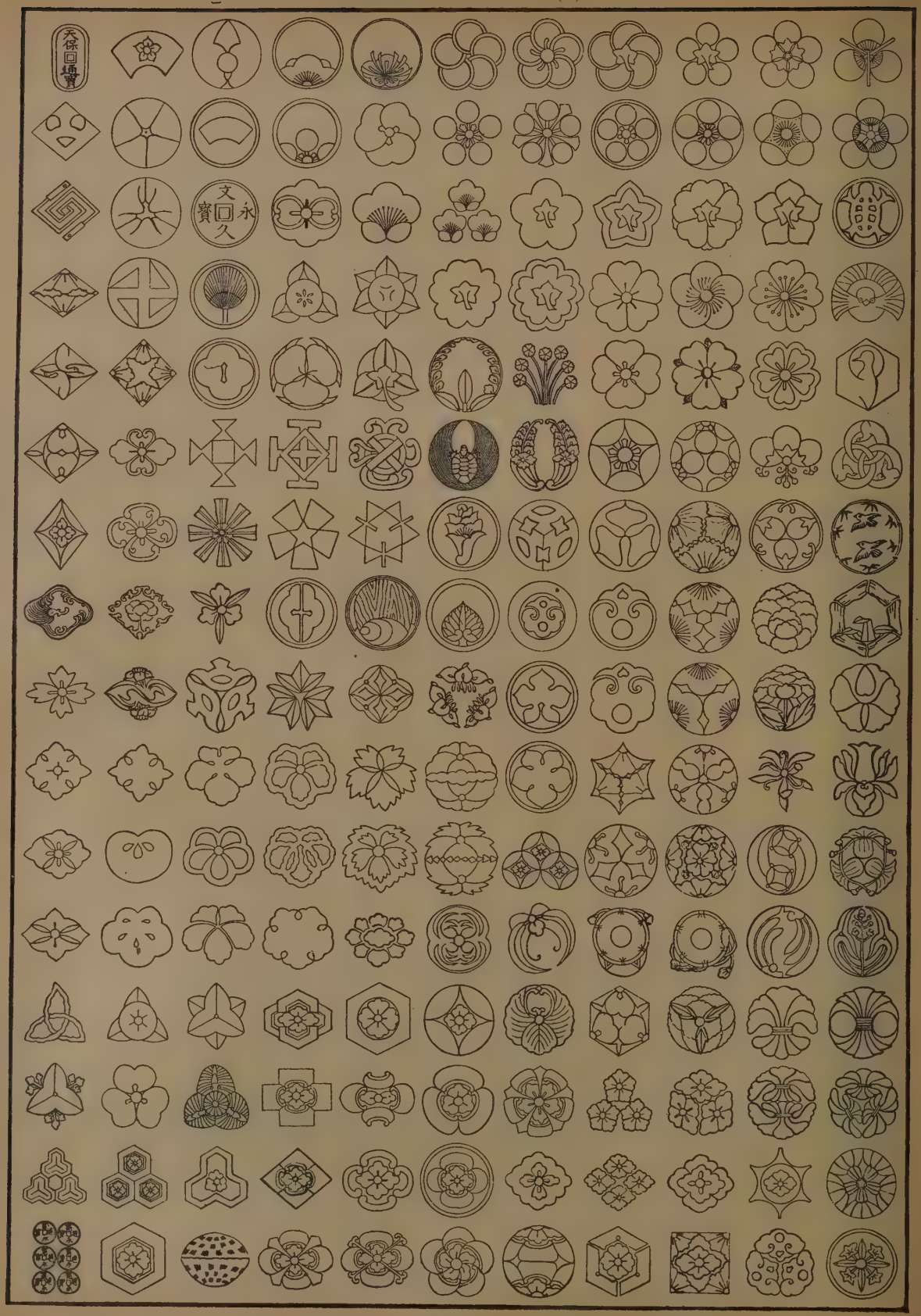
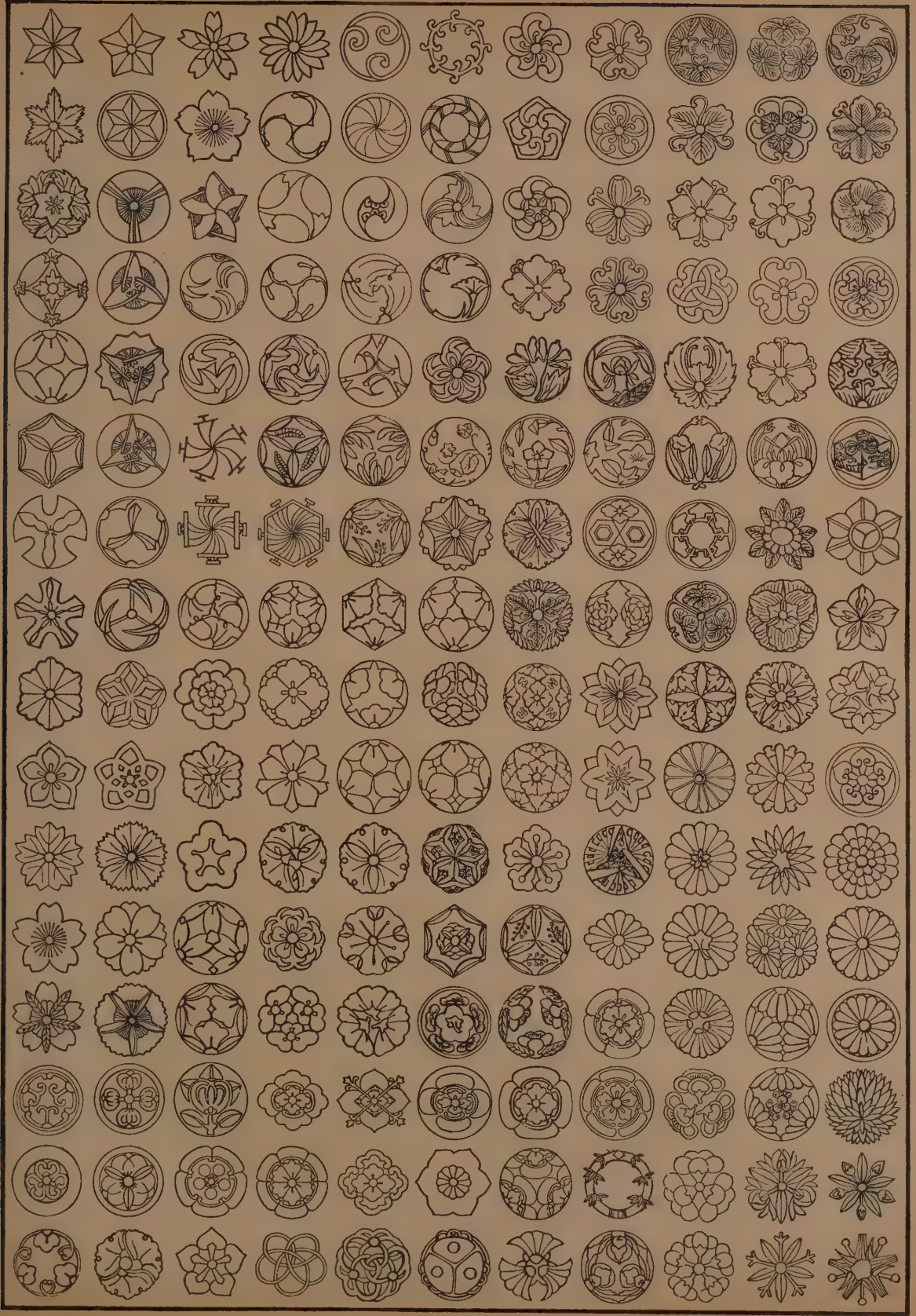


CHART XVIII-(*e*).



SOME CHARACTERISTIC FLORAL SYSTEMS

(The direct invention of Nature)

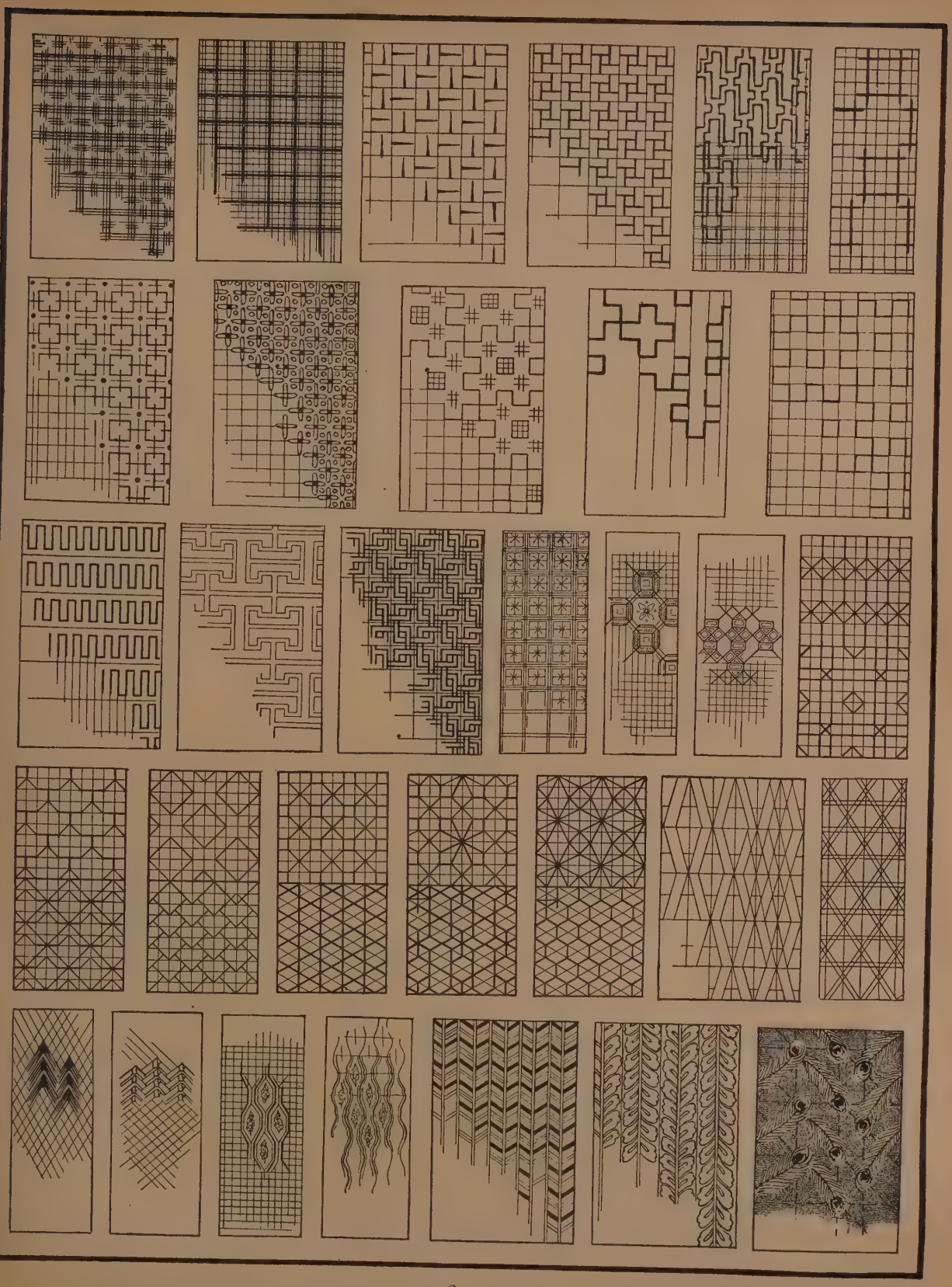


CHART XIX.

MULTIPLICATION OF DECORATIVE UNITS

WE NOW give a series of Japanese charts in which the decorative unit, once generated, is made to broaden and enrich its interest and charm by being multiplied mechanically across a surface.

This regulated Reproduction, as we will see, may often greatly enhance or totally modify the character and force of the first unit itself.

For constructive purposes and artistic effect there is generally an Underweb drawn off, first, which may have any satisfactory proportions for its constituent spaces; or any "Set" to its general direction and trend of optical movement. Then across this is drawn the Overlay of freer movements and forms. Sometimes the underweb is more or less silent or concealed—or it may be given a powerful share in the composite effect, on purpose to strengthen or control the freedom of the overlay. But it should always be there in its influence, constructively, in designs intended for staid and somewhat mechanical effect by repetition.

The "under" and the "over" elements are respectively the Father and the Mother influence in the pattern, and like a good household they should be united in a harmonious result. Indeed, the father's presence should still be *felt*, though his bodily absence is at times permissible.

The examples of this Chart XIX. are mostly abstract forms, constructed upon a simple rectilineal underweb or base, and with rectangled or slant "sets" (that is, directions or trends given to the pattern). The last three designs throw the "set" of the overlay strongly up and down.

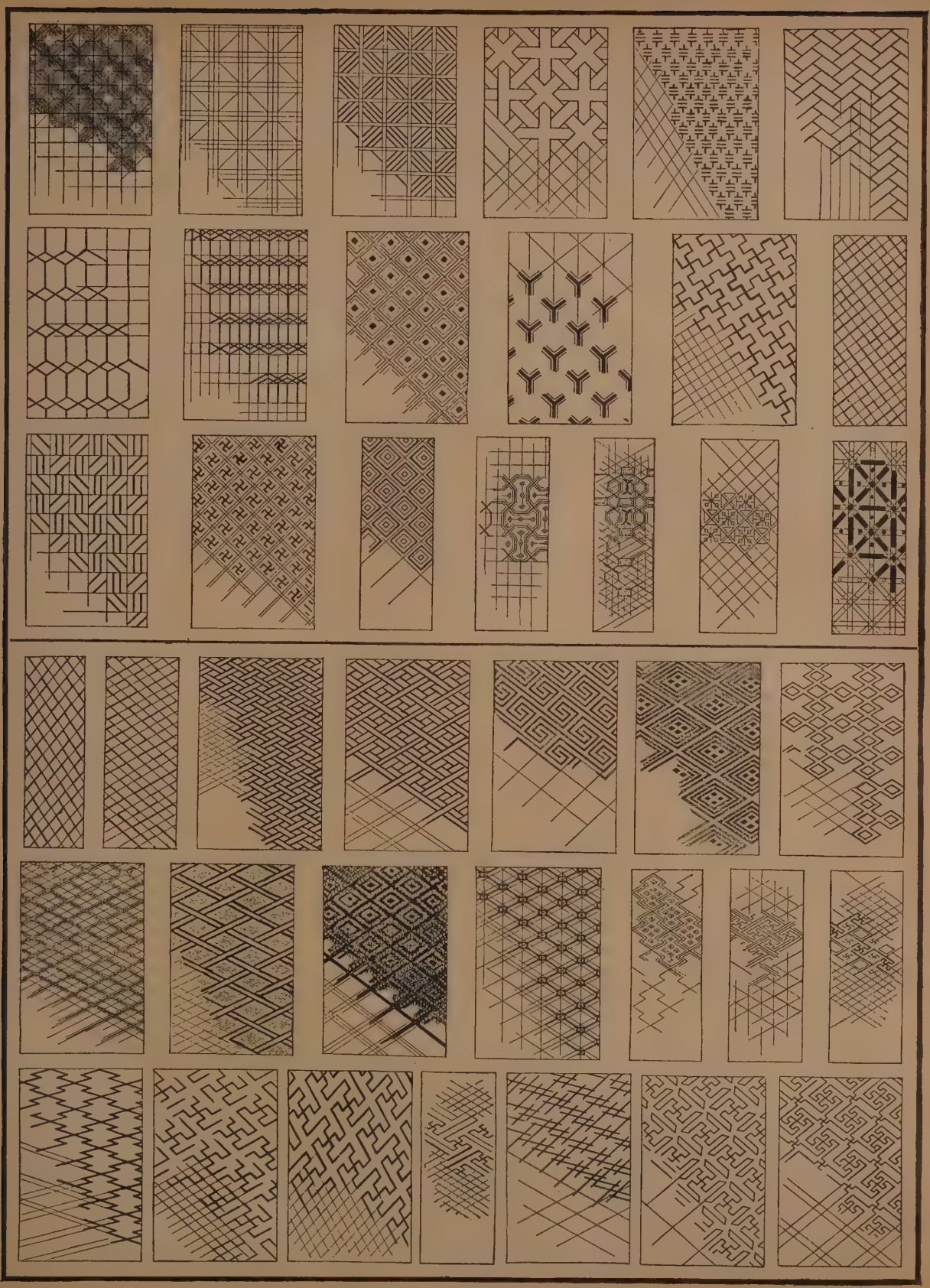
CHART XX.

THIS CHART continues the experiments in the multiplying of decorative units; these examples also being of pure geometric character instead of taken from suggestions in the floral or the animal world.

The underweb of some is still rectangular, though we begin to introduce those in which the underweb is constructed more obliquely upon the diamond or rhomb.

The overlay also begins more and more to play away from the simply severe and rectangular into the slant, the cris-cross, and the complex meander.

CHART XX.—PATTERN



CHARTS XXI–(*a*). AND XXI–(*b*).

IN THESE charts the underwebs (or bases) are squares, oblongs, rhombs or hexagons, variously treated, but the overlays grow more and more intentionally complex and composite, involving many suggestions from crystals, leaves, flowers, and even weapons like swords or jagged thunderbolts.

CHARTS XXII–(*a*). AND XXII–(*b*).

IN THESE charts, while the underwebs are much the same in construction, the overlays grow more curvilineal, undulate, rotary and radiate in character and general "set."

This will bring out the student's ingenuity to invent or reapply similar movements and combinations to suit new purpose and expression. Let every combination be one for *intentional* character, and tend more and more to grow out of some specific ideal, for some specific application.

CHARTS XXIII–(*a*). AND XXIII–(*b*).

IN THESE final pages of examples of decorative units, multiplied regularly in one plane, for ornament, the underwebs grow less and less severely evident, and are either caught up and concealed by the final pattern or left wholly *latent*. Their influence is felt throughout the pattern, but purposely not incorporated nor revealed in the final effect. The overlays, also, become more and more distinctly generated out of natural rather than abstract or geometric suggestions. Not merely leaves, flora, gourds and starfish are utilized, but fish, butterflies, birds and fantastic dragons cleverly simplified for conventional application to design.

In all this the student must especially remember that the *Spirit of Ornament must dominate his use of every element*, and that to get the best results in the decorative field he must ever select out of Nature those elements which most conduce to his *deliberate Ornamental Intent*. For this reason he must feel wholly free to select and to reject irrelevant elements, according as his artistic feelings and the conditions require, and *never slavishly mimic* nor blindly copy the material found about him in Nature. This would be as bad art as for a cook to serve up from the market the raw meats and vegetables purchased, without ever thinking to select, cleanse, flavor and rearrange them with proper taste and artistic treatment.

CHART XXI–(*a*).—PATTERN

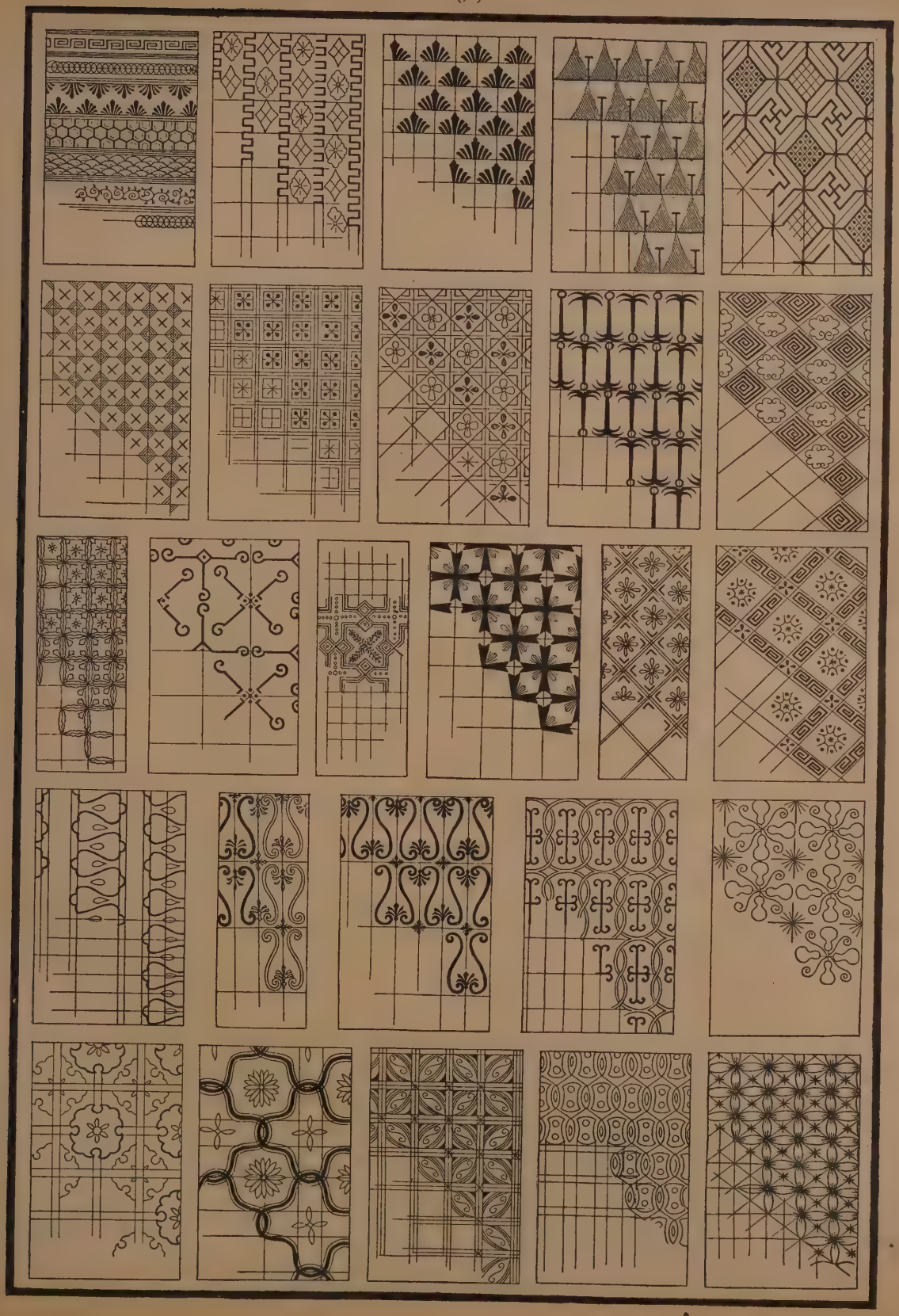


CHART XXI-(*b*).—PATTERN

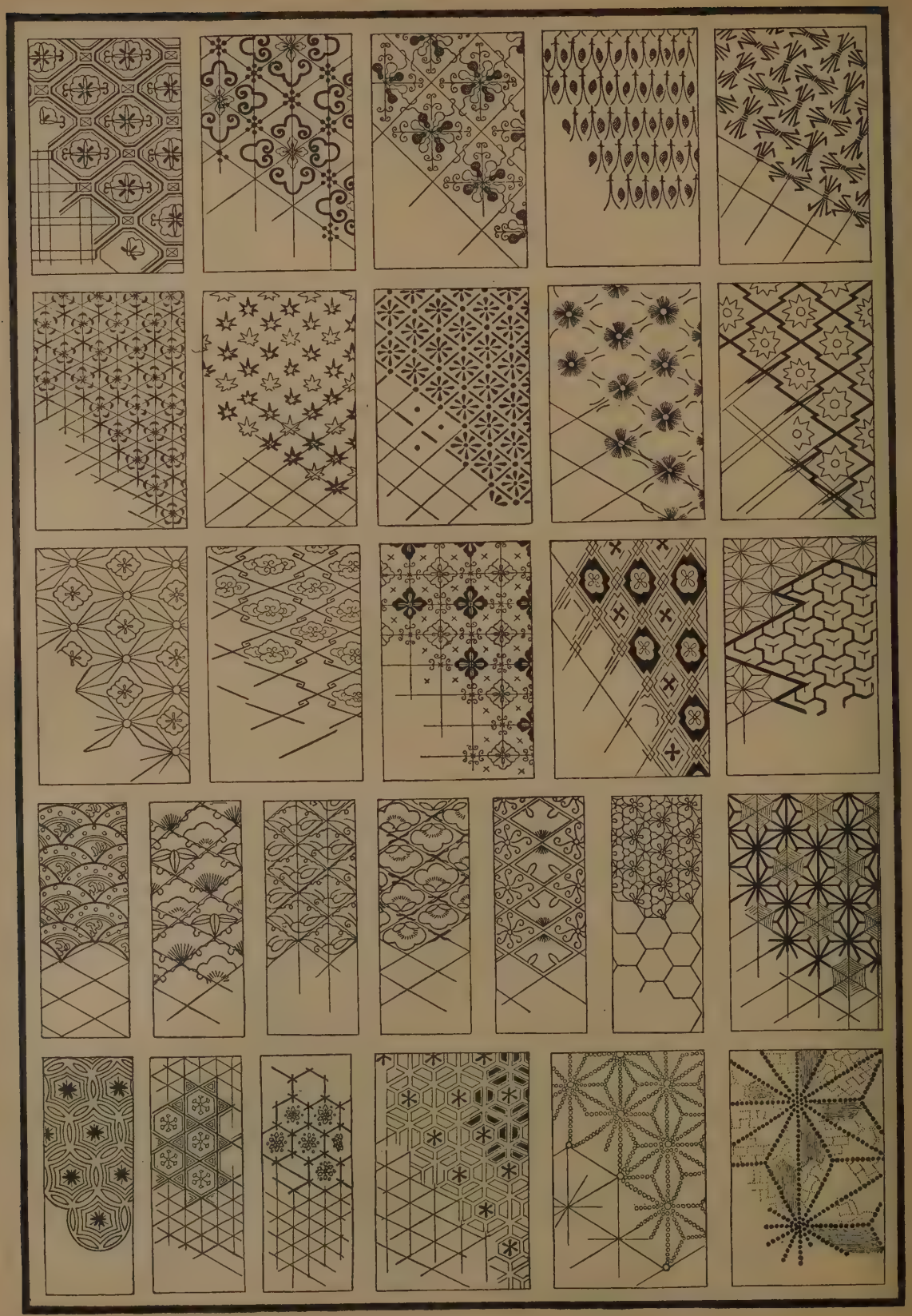


CHART XXII-(*a*).—PATTERN

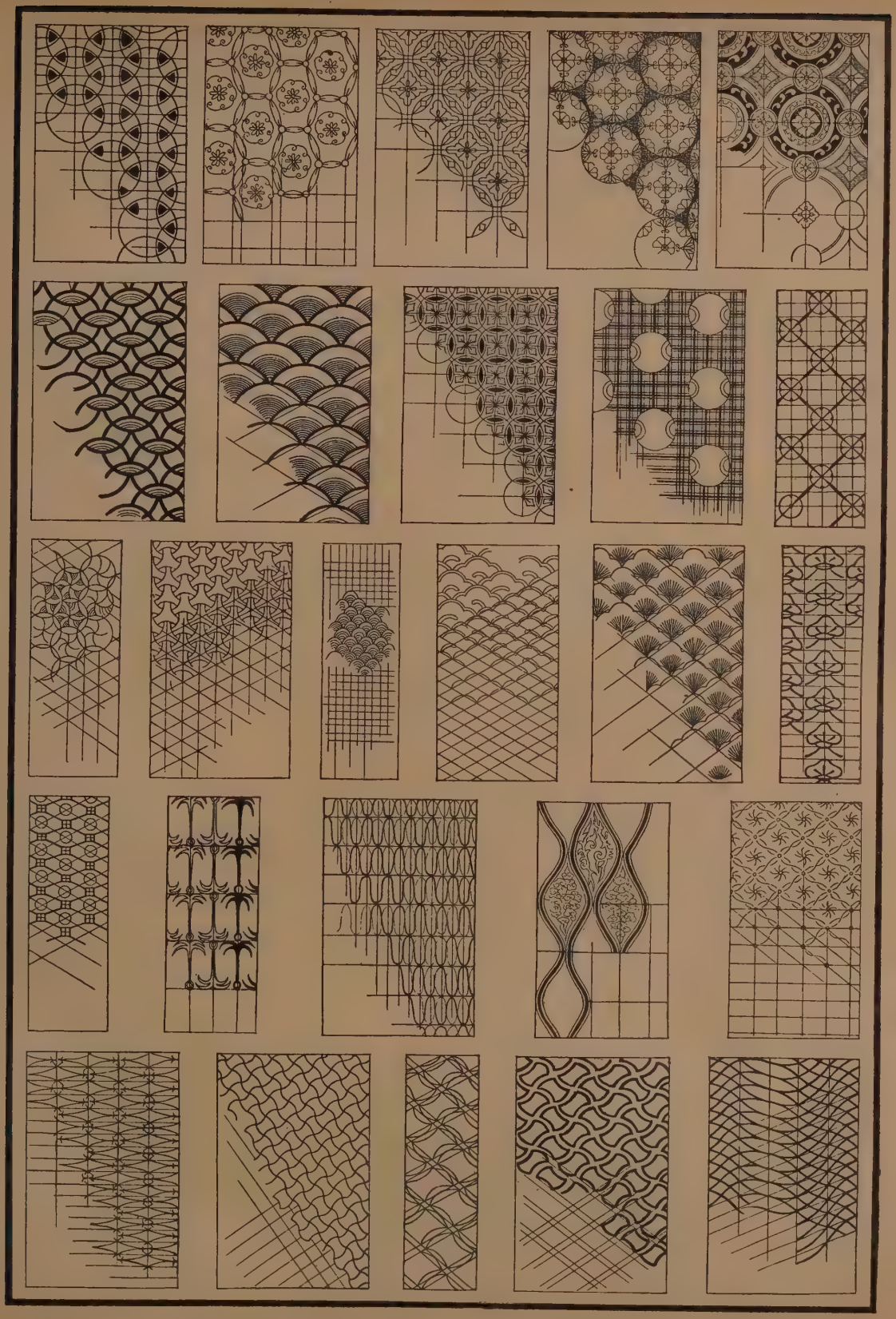


CHART XXII-(*b*).—PATTERN

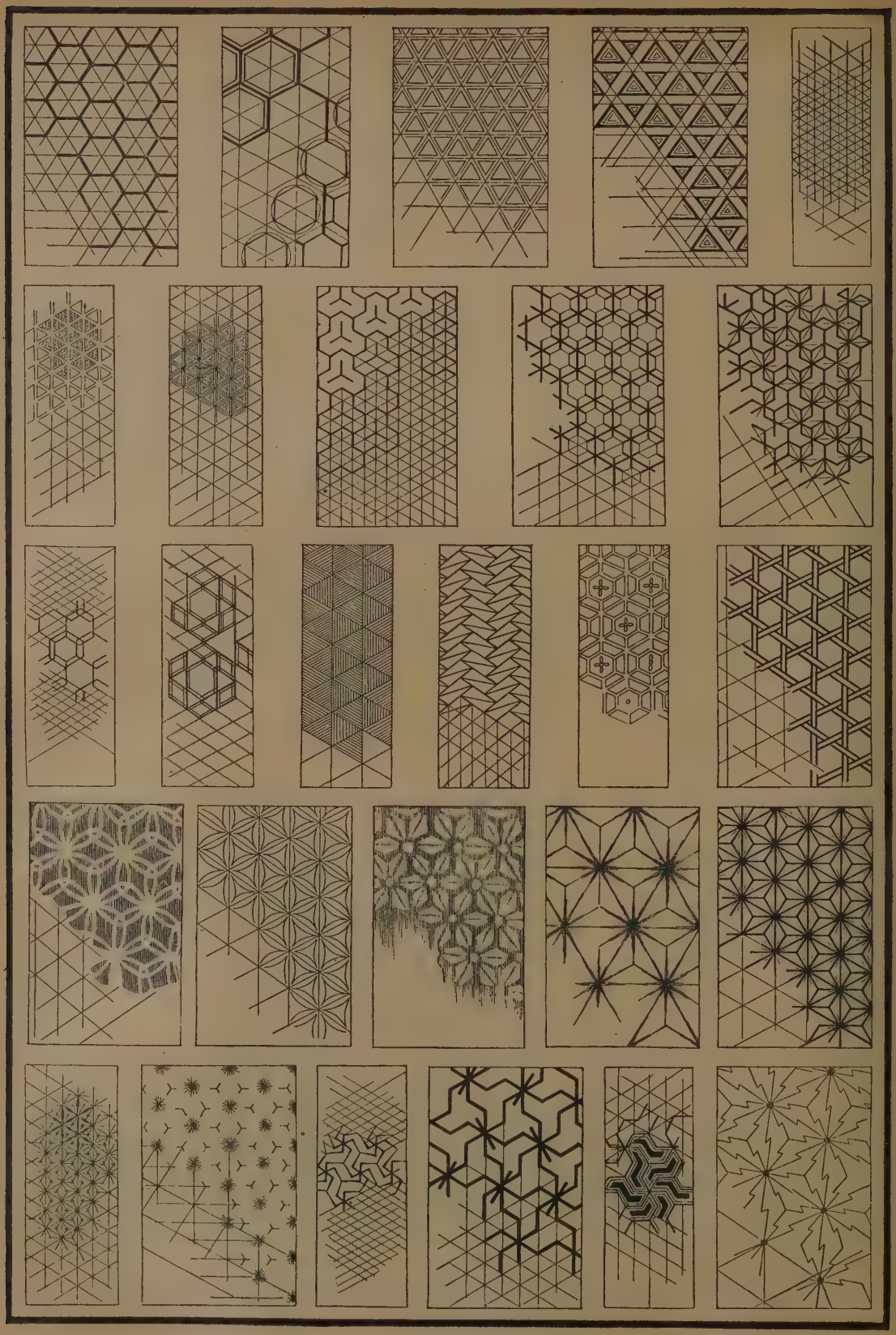
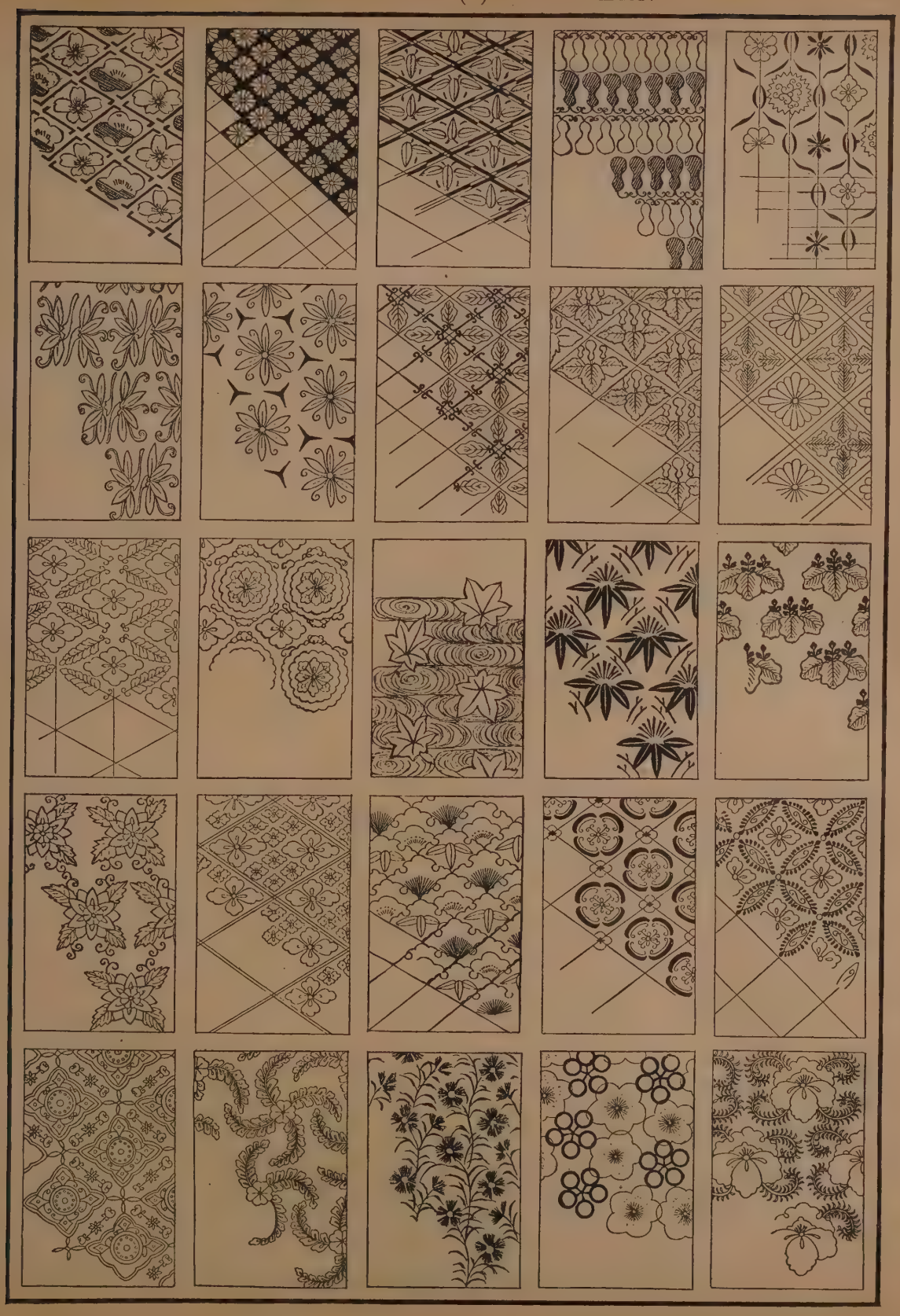


CHART XXIII-(*a*).—PATTERN



CHAPTER XII.

LIFE DRAWING

"MICHAEL ANGELO had LAWS before his mind, of which we hear no more at the present day. He repeated this after Vitruvius, perhaps, but not without having tested it as *true*, that only he who is acquainted with *human anatomy* is able to form an IDEA of the necessity of an architectural plan. Every part increasingly necessitates the next, and nothing may be done without having the Whole in mind. . . . He arranged every proportion according to the extent of the whole work."—*Herman Grimm.*

Burne-Jones Pinx.

CREATION

M. Angelo, Del. By courtesy of Mr. J. C. Nimmo

LIFE STUDY—FOR THE "CREATION OF ADAM"

LESSON XXIV.

LIFE DRAWING

IF A STUDENT has properly observed the Origin, Character and influence of the Introductory Forms and Relations hitherto presented, together with that most important consideration, the Beauty that comes from their proper Harmony and Control, in Combination for special expression, he will be ready to perceive and to vitally express these same forms, relations and beauties, when they are presented in more composite situations or organizations.

If one has quickened, in his imagination, the latent powers of Form-generation which geometry admits, and has understood (as in Lesson XIV.) the *Inner Constructive Life* of abstract form, he will be ready to recognize the same *Internal Life in all forms*, and not try to draw them superficially. He will also have seen, through the charts we gave from Nature, how in every leaf, insect, fish or bird, these inner constructive relations are visible or latent, and will have practiced drawing them, sufficiently long and fully, to go on with ease to animal and human forms. The tendency of Nature, in the lower realms of the vegetable and insect world, is to indicate pretty clearly and externally, as in leaves and bugs, the Constructive Elements that are beneath the Plastic, or Decorative, ones. But in higher animal life Nature conceals these constructional elements more and more beneath flesh, hide, or hair; expecting that you will have already seen, appreciated and remembered them.

It is so with the progressive lessons and stages of our own Vital Course, founded directly upon her methods and spirit.

Then, too, the preceding practice in line and surface design and in decorative composition should be so fully and richly investigated and familiarized, as to prepare you amply for experimental composition with later and higher elements.

AND NOW after explaining the classic and vital methods of Life Drawing, we will guide the student through historic Principles and Methods of Higher Design.

Just as we should avoid all shallow superficiality and mere externalism in drawing rudimentary or even mechanical forms, and should rather see *into their internal structure and relations* (the better to draw them in a true and expressive manner), so the true artist should perceive deeply and express vitally the Motions, Measures, Structures and Type Forms, involved in growing and moving organisms—such as flowers, birds, animals and human beings—before he attempts the overlays of muscular tissues, draperies and ornaments.

As architects comprehend the constructive relations of beams and rafters that support and partition a building, and even reveal through its external shell the internal life of the occupants, so the great classic sculptors of Greece and the master draughtsmen of Europe (such as Da Vinci, Raphael, Michael Angelo, Dürer, Rembrandt and Millet), deeply comprehend the *inner life* and significance of the living forms they present. Their lines are *free, vital, deeply interpretive and suggestive.* They scrupulously avoid all dead lines, all soulless "blocking systems" or monkey tricks. Their lines and forms are full of Meaning. Through their drapery they feel and render the plastic flesh, and through the flesh the strong structural life within. Like Nature, they reveal, in each case, so much of this as *is best* for the finest artistic and poetic significance of the whole composition, being their own judges in every case, as to the right Proportion of the constituent elements they employ.

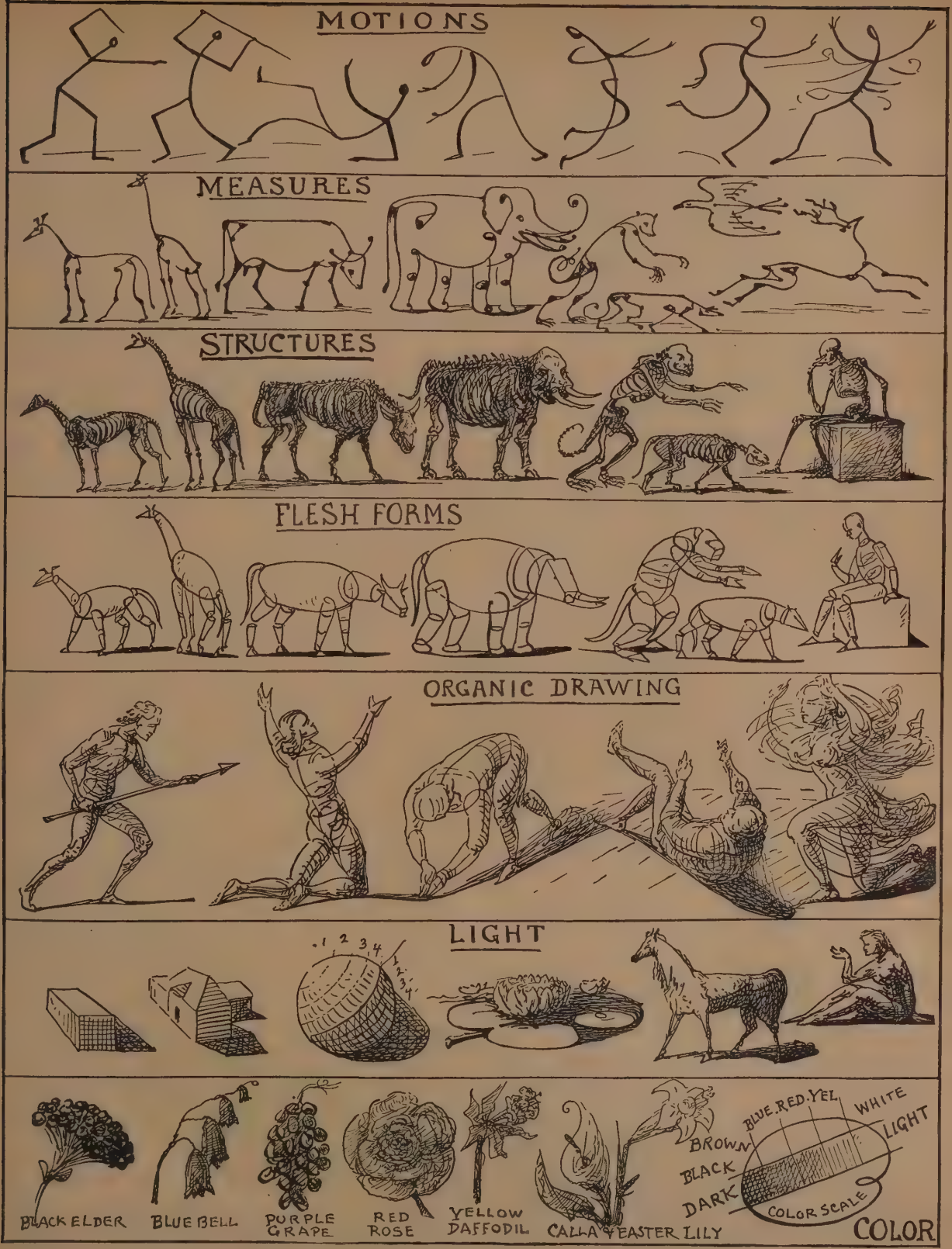
These elements, as we see in the accompanying Chart XXIV–(*a*)., consist in noticing, by orderly and intelligent stages:

First. The Main Movement of any growing or organic form that is to be drawn. This line is a Line-of-Movement, of growth and action, and is (like the Will itself through the nerves) an *internal* ideal line. In leaves it is often given by their "mid-ribs"; and in vines that run by long and slender threads, it may be easily and simply identified with the vine's stem. But where, as in a vase, column, tree, or animal's body, Form expands into thickness, we must hold the great Line of Motion identical with the axis of the vase or column, and with the core of the tree, and with the general bony center of the animal body.

If the subject to be drawn is composite enough to have several objects, or movements, it is well to set the extremes of these objects and movements correctly and lightly upon the paper or canvas, in true relation to each other, before connecting the extremes of these movements by the appropriate intervening lines.

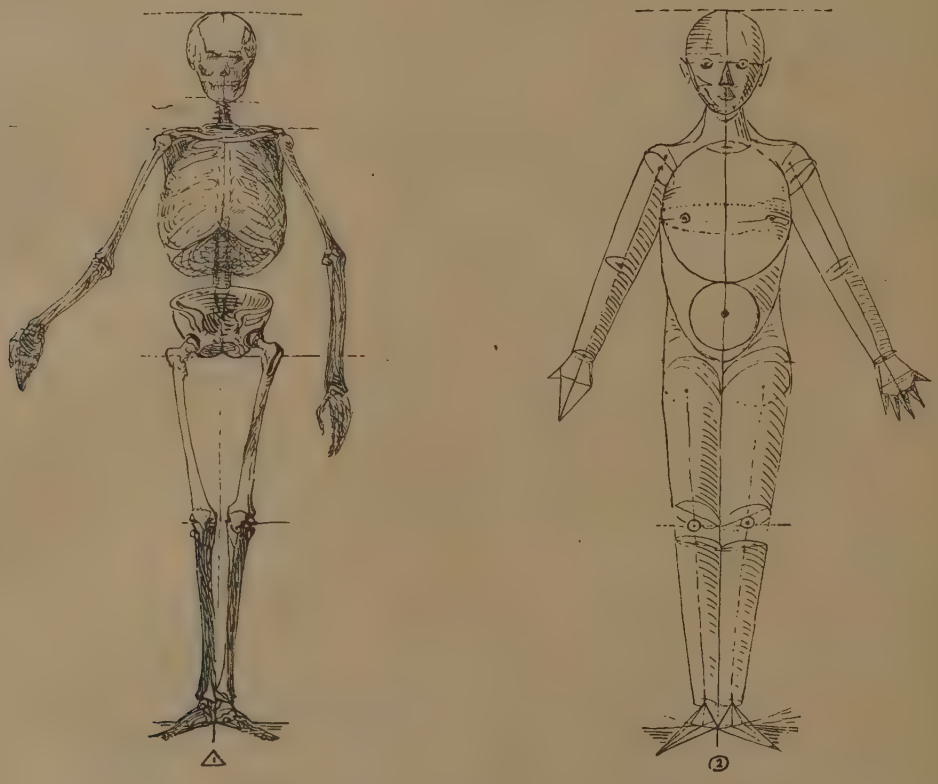
In all growing and standing things it is important to follow Nature's own movement of Growth, *from below upward*, and to draw this general Line of Movement from the point of origin, or support (below), upward and outward to its culmination. Thus, in drawing a man running, we should start from the point of his support, in toe or heel upon the ground, and follow the motion of his entire body to the top of his head, before we added on the movement of the second leg that is above the ground, in air. If one only decides well on the starting place of the movement, and holds the other extremity of the movement surely and steadily in its *related* place, it becomes easy to set the intervening Line-of-Direction, about which (afterwards) the Muscular Form can be laid; and, from which, subordinate actions such as those of the arms can be made to extend.

Secondly. It then becomes necessary to mark off, lightly, on the Lines of Direction, the few great Divisions of the main movement. Thus the whole human skeleton is seen to divide into two Great Halves—an upper and lower. This


MOTIONS
MEASURES
STRUCTURES
FLESH FORMS
ORGANIC DRAWING
LIGHT
BLACK ELDER
BLUE BELL
PURPLE GRAPE
RED ROSE
YELLOW DAFFODIL
CALLA
EASTER LILY
BLUE. RED. YEL.
WHITE
LIGHT
BROWN
BLACK
DARK
COLOR SCALE
COLOR

line of first subdivision is fixed by Nature at the *base of the pelvis*, or just below the genital organs. It is, so to speak, the base of the great Ovate Form of the trunk, as shown in our two diagrams on the "bony" and the "fleshy" Systems of human structure. In good models this line is found very closely midway between the heel and the head—though of course the student limits by proportioned Measures before the student seeks details.

Thirdly. We now notice that Nature carefully preserves these main sets of measures by a firm Skeleton of carefully adjusted joints, a bony framework that admits of only limited freedom in *sidewise* movements, but does not disturb the



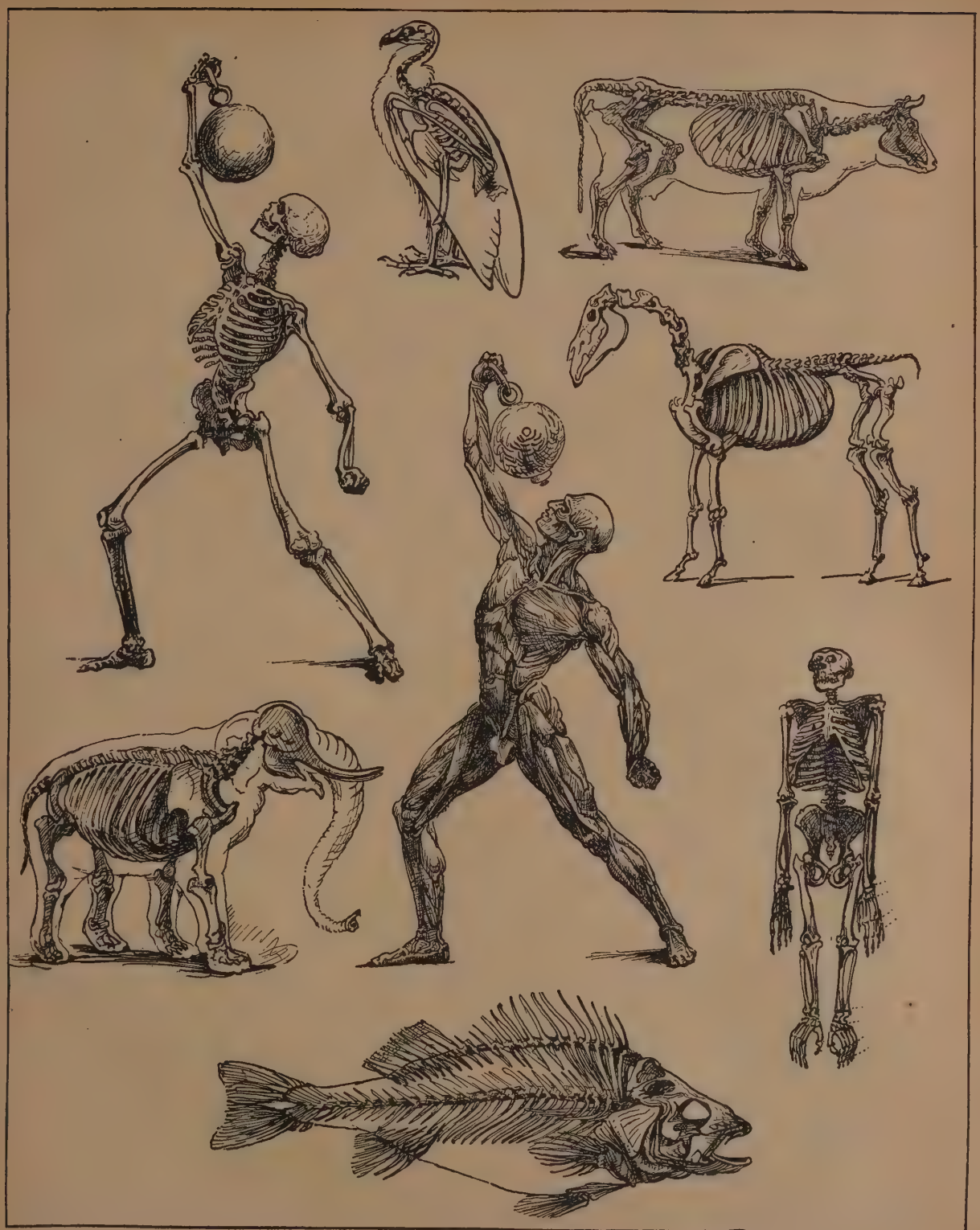
BONY AND FLESHY STRUCTURES

will raise or lower this middivision if his model happens to be irregularly long or short in the legs.

The next largest subdivision to find, in drawing man, will be the top of his Torse or trunk, where the base of the neck's Cone attaches to the trunk at the collar-bone.

The next in order would be the line locating the Knee-joint division, and the Ankle. Then set off the base of the oval Head, at the Chin-point; and begin with the next consideration, which we will now proceed to explain. Every object should be thus subdivided first, in space, into its main clearly determined *lengths*. Hence we should acquaint ourselves fully and carefully with the character of the skeletons of all animals which we treat, and especially of man's. For these bony divisions, joints and substructures will appear constantly protruding through the flesh, affecting very much its form and modeling, and giving it force and support.

Fourthly. Not till we recognized these three grand facts about animal forms could we properly consider the next important fact, viz., that (to con-



STRUCTURAL RELATIONS; BETWEEN BONE AND MUSCLE

CHART XXIV–(*c*).

MUSCULAR TREATMENT

FLESHY TREATMENT

J. W. Stimson, Del.

ILLUSTRATIONS OF VITAL TREATMENT

Raphael, Del.

VITAL STUDY OF A HAND

Raphael, Del.

FREE-HAND, VITAL, LIFE-STUDY

Raphael, Del.

FREE-HAND, VITAL, LIFE-STUDY

Raphael, Del.

FREE-HAND, VITAL, STUDY OF BATHERS

M. Angelo, Del.

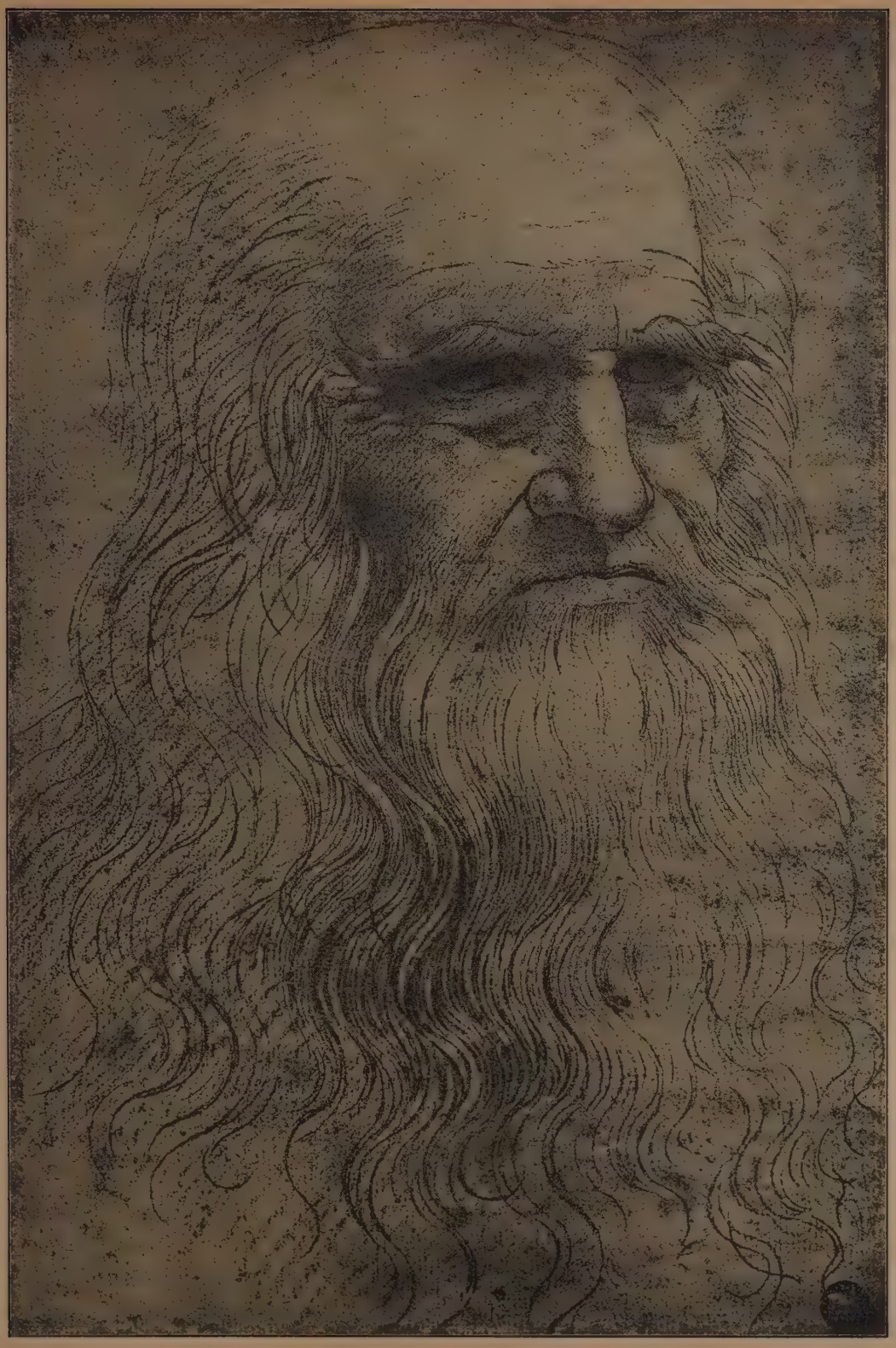
FREE-HAND, VITAL, STUDIES OF ARMS

Tintorretto, Del.

LIFE-STUDY OF A NUDE MAN

Da Vinci, Del.

FREE-HAND, VITAL STUDY OF A FEMALE HEAD



HEAD OF DA VINCI, BY HIMSELF

Bronzino, Del.

VITAL LIFE-STUDY OF A YOUTH'S HEAD

M. Angelo, Del.

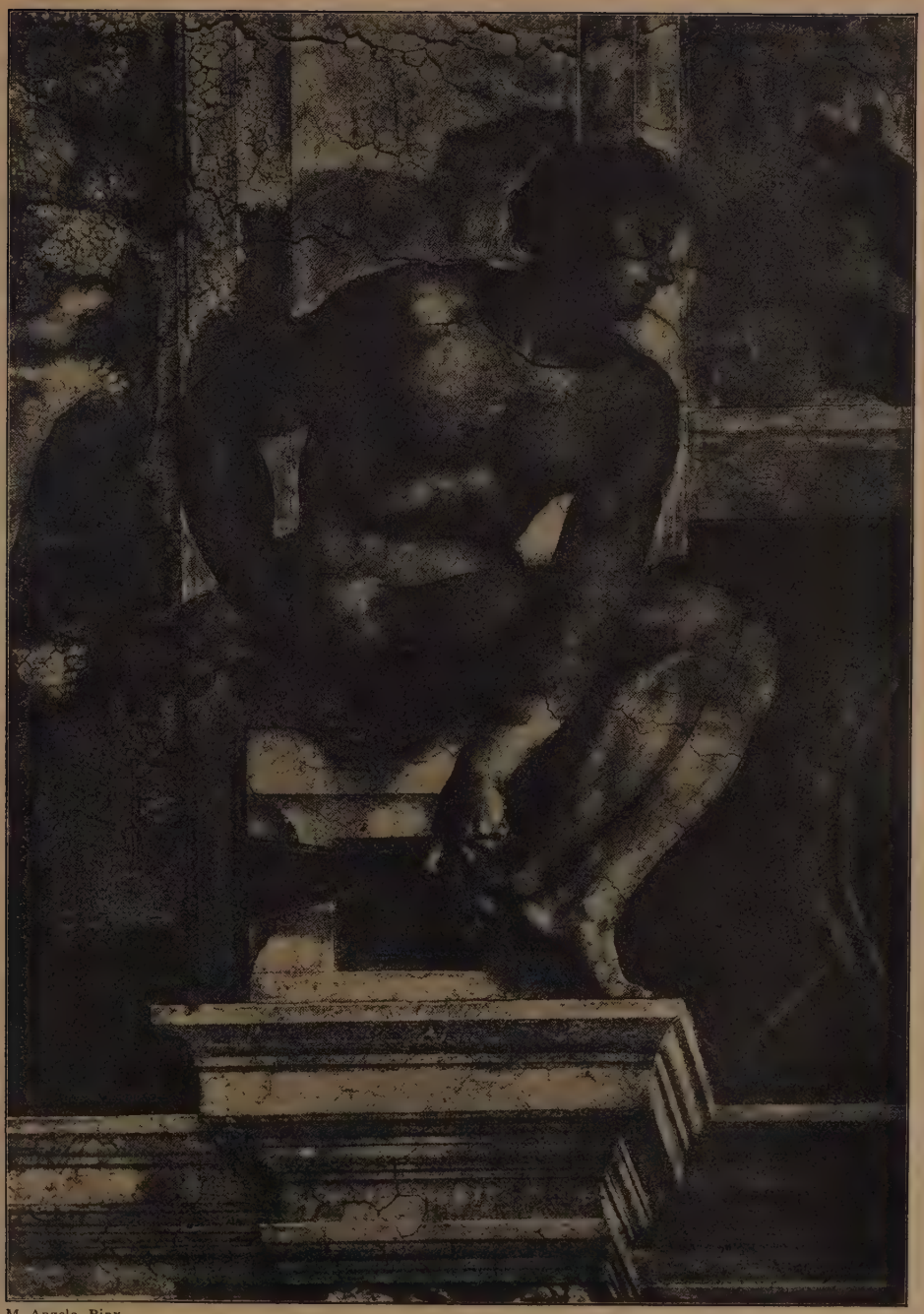
VITAL LIFE-STUDY OF A MAN'S BACK

Raphael, Del.

FREE-HAND AND VITAL DRAWING OF WARRIORS

A. Carracci, Del.

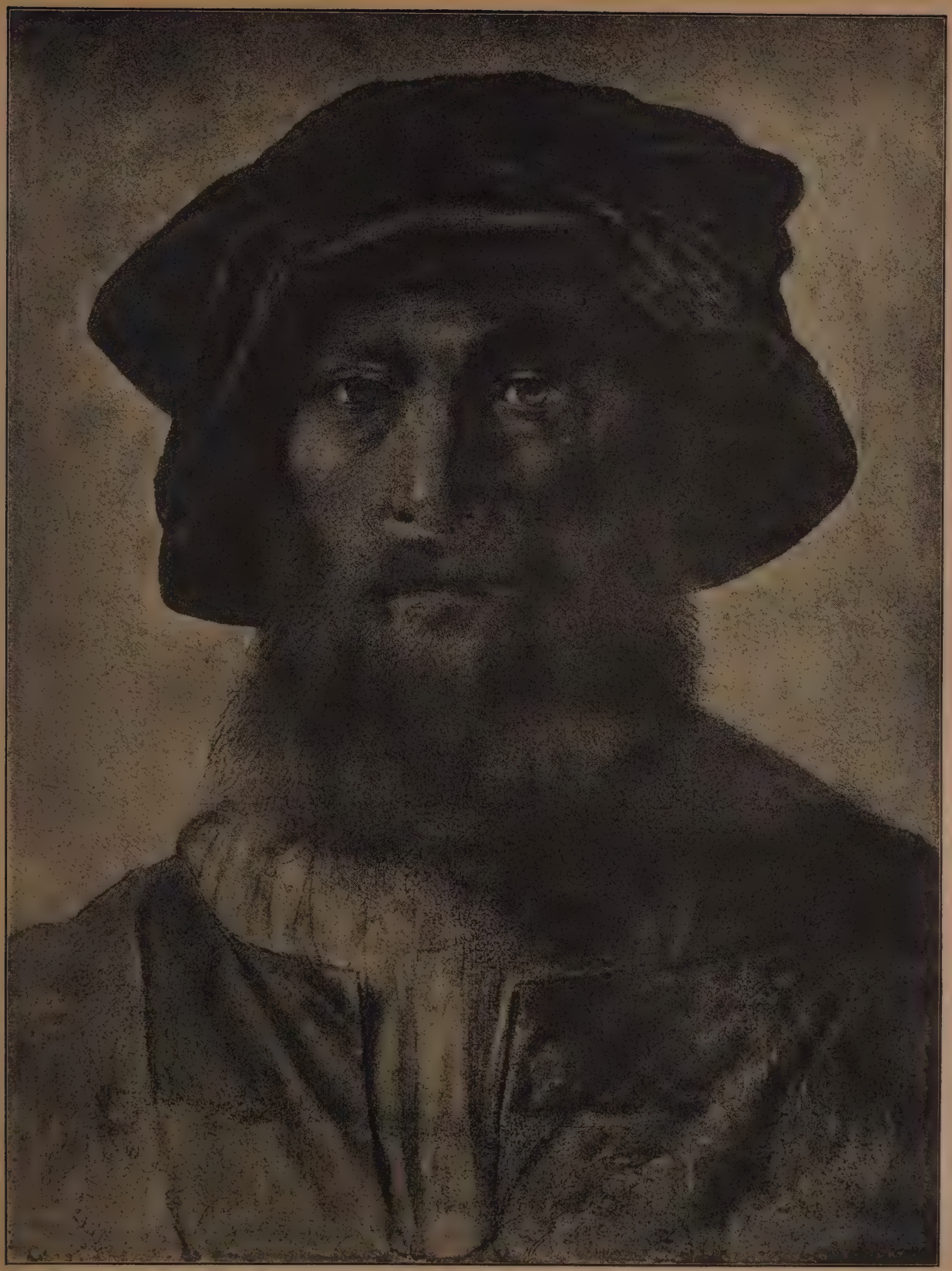
FREE-HAND SKETCH OF AN OLD MAN



M. Angelo, Pinx.

LIFE FIGURE, IN FRESCO

(Giving broad gradation)



Raphael, Del.

PORTRAIT OF TIMOTEO VITI

trast with this firm subordinate Underweb of crystallized Bone) there is an Overlay of soft, flexible Fleshy Tissue, which, when viewed broadly and simply, assumes the general constructional form of upright Ovals for the head and trunk of the human body; and of Cones descending for the arms and legs; but of a Cone ascending, for the neck. The feet take the general form of Pyramids horizontally extended toward the toe-point, *i. e.*, the direction of advance. The hands and nose also are flatly pyramidal. The breasts are (in woman) Hemispheres. And the eyes, in both sexes, are ellipsoidal. The ears combine form influences from the Triangle, the Ellipse, and the Cone, in their catching and enlarging sound after the manner of a sea-shell. The lower animals utilize and vary much the same constructional elements. (See pages 303, 304 and 305).

It is wise, therefore, to lightly cast up in perspective, with a delicate touch, these first few substructural elements of all animal forms, when we start to portray them. They are, so to speak, the *Spirit Lines* on which the final materialization of the Visible Body will take place; the Scaffolding by which the palace of final Beauty can be erected. And we will find that, far from taking down altogether her structural scaffolding, at the end, Nature retains and permanently incorporates much of it in the final external appearance.

Thus the Joints are very strongly marked by wrinkles in the flesh and by incisions of the tendons. The Dome of the crown retains strongly the ovate type of the head, as do also the cheeks of young people. The curved ribs, that go round the upper half of the trunk, do the same service in retaining the ovate character of this part of the body. And even though the front of the belly is left free for flexibility (necessary in movement, digestion and parturition), yet the great bones of the Pelvis basin serve admirably to retain the lower part of the trunk's oval. Cones are left quite evident and undisturbed in much of the arms, legs, fingers and in finely-shaped necks. And at the base of the Neck a collar-bone is added to aid the upper ribs in this same constructional effect upon the outside. Around the Torse run many lateral wrinkles which help the eye of the draughtsman to catch the solid ovoid nature of the form, as do lines of the brow, or hairs of the head; while, up and down the middle of the head and trunk, run distinct and forcible lines including those of the backbone (in the rear) and the sternum (in front), with central partings of hair, lips, moustache, beard and belly lines, that distinctly serve to *divide the body perpendicularly* into its two great lateral and reflected sides.

Fifthly. Now we are ready to model up any form into space (if in clay) or to draw it up into apparent space (if on paper or canvas) with "living," organic and flowing lines; with free and yet certain power and grace; making each stroke take up and tell, with varying and quick selection or pressure, a thousand condensed and suggestive facts of action, form and feeling, giving bony support, fleshy cushion and muscular tension, and even changes of color, texture and light.

Sometimes one may emphasize a little forcibly —as do Michael Angelo and the earlier ascetics of Italy and Netherlands—the bony and muscular elements of the human form. While Raphael, Titian, Correggio and Del Sarto dwelt preferably upon the fuller and softer charms of flesh —whether male or female. I have drawn a couple of figures (male and female) in each of the two different spirits, to show that it is a matter of interpretation and preference (page 306), though individual instances may naturally emphasize a tendency toward Strength or toward Grace, according to special sympathies or situations.

There is no doubt that the early rigor of primitive Christians, or the naturally masculine virility of Michael Angelo, occasioned a deliberate preference for *Austerity* and *Energy* in art expression. While the later, more luxurious and amiable tendencies of other artists decided their softer styles. It would be normal, however, to expect of the two sexes, that the masculine would generally embody more vigor, while the feminine would incorporate more tenderness and grace.

The observer will see, in the many beautiful drawings of the human figure just inserted, from such supreme masters as Angelo, Da Vinci, Dürer, Raphael, Rembrandt, Tintoretto, etc., that

ETCHING OF REMBRANDT, BY HIMSELF

they all established this Classic Vital Method—of drawing *from within outward by organic comprehension and conscious selection*, subjectively giving their own feeling and personal character, while they freely and poetically interpreted Nature the common master.

But they *never, and in no instance*, can be found to have superficially and blindly used any deadening "blocking system," imposed upon ignorant beginners by shallow teachers—who being superficial mimics before Nature have never comprehended her majesty, dignity and Developing Order nor recognized the virile and loving Growth by which the grand old masters *rose upward* to their eternal supremacy and splendor.

The great need to-day, throughout all art schools, is to bring students so close home to the wonderful processes and evolutionary Unfoldings of Life itself that they will search and see, as did those great masters, *through the outer shell into the inner realities*, and learn to be reasoning, intellectual and inspired Men, not monkeys.

Sixthly. When the student has acquired power to express the forms of life in eloquent and living lines, he can consider the Gradations of Light that fall upon the various masses and planes, striving to remember always to give his canvas the same apparent *depth* of space that the original form possesses; and to hold constantly in thought the *Source of light* by which his model is lit, the better to recognize the different tipping planes by which the model reflects light, or shuts it out more and more.

Every Center-of-Light divides the solid object it falls upon much as the sun divides our globe, into a side of day and a side of night, *in contrast*. And as day and night has each its hours, minutes and seconds, so every solid object is apt to give us, as a piano does its scale from high treble to low bass, a series of *graded* octaves and notes in which it is very important to recognize the octaves before we seek the individual notes.

For simplification of execution, it is well for beginners to limit the number of these Octaves-of-Light to the "Full"-light, "Quarter"-light, "Half"-light and "Three-quarter"-light (shown in Chart XII., page 268), before reaching the Shadow. Shadow itself may then be similarly subdivided, and then the gradations or Notes in these octaves may be delicately sought and completed for both the light and shadow.

In placing these main Gradations of light and shade it is well at first to outline them carefully upon the form, however such outlines may twist about an irregular figure. The student seeks to *enclose* nearly the same octave of light, and he

can give to the outline of each octave the same depth of dark with which he will afterwards "fill it in" by means of compact lines for shade.

Should there be several objects in the picture, retreating behind each other, they must first be considered as *wholes*, related in varying large octaves to each other, before they are subdivided by individual shadings.

Lastly. He can then combine with the above the study of special Textures of substances and of surfaces, whether translucent, opaque, porous, metallic, reflective or fibrous, etc., and the charm of "local color" or of general atmosphere.

Correggio's "Night of the Passion" in the shadows of Gethsemane, is a strong example of this element of Atmosphere, and gives us first of all, a living, suffering hero, full of tragic character, self-renunciation and sweetness. But—over all the power, simplicity and beauty of true drawing and composition—there is the wonderful Atmosphere of a somber and *night-drowned world*, out of which his broken and agonized prayer for help seems to leap. The dawn of day, appearing over the horizon, and the administering angel that descends to support and comfort, only accentuate the world of shadows through which the roughness and weariness of the land appears. The picture is studied and conceived first *as a whole*, and then in its separate and subordinate parts.

In this study, as in effects of moonlight, Color is almost wholly absent, and the technical beauty is due to great depth of space and shadow Gradations, both by masses and by particulars. The loneliness, distance and gloom of the Christ-path, before the coming of the Light, is felt throughout the picture.

We show in Chart XXV. (page 339) how this sense of Depth, or "third dimension" (into a flat page, to render the Perspective of Nature) may be secured by remembering six simple laws, or rather one great law of Gradual-Diminution-by-Distance, and operating in Six Ways, namely:

(1) By parallel Lines seeming to *concentrate* toward the distance.
(2) By Objects seeming to *grow smaller* toward the distance.
(3) By *Light* gradually weakening toward the distance.
(4) By *Color* gradually weakening toward the distance.
(5) By *Contrasts* between light and shadow, and also contrasts between separate colors, weakening toward the distance.
(6) By *Details* steadily *disappearing* toward the distance.

HENCE when we deal with Color, as one of the great charms which Nature adds to the surface of most things, we must remember several important points:

First, that Color is beautiful in itself and in a wholly different way, or sense, than Construction and Form are beautiful. An Easter lily, a floating

Correggio, Pinx.

CHRIST IN THE GARDEN OF GETHSEMANE

swan, or a marble god may remain exquisitely beautiful though the sense of color be practically absent. On the other hand, the glows of sunset or hues of Indian summer, shimmering rainbow or stained rose-window may ravish us irrespective of their form. But, in general, Form and Color are closely and constantly associated in Nature, and, practically speaking, all forms may be rendered to the eye by gradations and blendings of color with light.

We must remember that while Color is a child of Light, yet, to the colorist, it differs greatly in sentiment and character from its parent. However refined and luminous may be a white marble statue or temple, its sentiment is of another order than that of a glowing twilight or superb rainbow. The angelic purity and elegance of an Easter lily can never supplant, in human affection, the tenderness and passion of a melting rose. Form is more intellectual, but Color more emotional. The first appeals to the Mind, the second to the Heart. Form is masculine, Color feminine. Life must combine them both. To appreciate either, properly, we must have a temperament somewhat naturally open to their specific appeals, though a well-developed nature should respond to both, as they are both marvelous and divine, and daily indispensable.

TO EXPLAIN Color phenomena and its associate sentiments we must employ a few terms that need technical definition. In this definition we must always remember that brain receives its optical impression of Space, Form and Color by means of White Solar Light reflected through the lens of the eye by the various atoms of Nature; and that these atoms, in all bodies, are more or less in action themselves, and they divide, absorb, reflect and variously qualify the impressions of the light that they receive or transmit.

Where they give us *all* the light that they receive, we call them WHITE.
Where they absorb *all* the light that they receive, we call them BLACK.
Where they absorb some and give away other rays, we call them COLOR, and know them by this latter act of their *generosity*, *i. e.*, by what they *give us* of Color.

Absolute White or Black is scarcely possible to find, since every object or color is more or less *reflected into* by surrounding colors. Indeed, we do not consider White or Black as properly colors, though in commerce they are made into dyes, inks, pigments, etc., and used on a palette as though they were colors.

The terms "light and dark" are, therefore, not the same in art as "white and black," for a white or a black horse must each be shaded with "light and dark," or we could not see their solidity of form.

When White is mixed with a color, we call it a TINT of color.
When Black is mixed with a color, we call it a SHADE of color.
But a Color may have different Depths of itself and yet stay pure, as when a pure red or yellow tissue paper is folded upon itself in varying thicknesses—in which case we call these various depths TONES; and any regular gradation of Tones, or Tints, we call a SCALE; but one color *mixed* with another we call a HUE.

A "Full Color" is a color in its purest and most positive state.

Any scale, may range, of course,

{ from a High-Tone, down to a Half-Tone, or to a Deep-Tone. }

But, when this Color Gradation is obtained with White and Black, it is (when mixed with White) a "Tint," and should be called

{ a "Light-Tint," a "Half-Tint," }

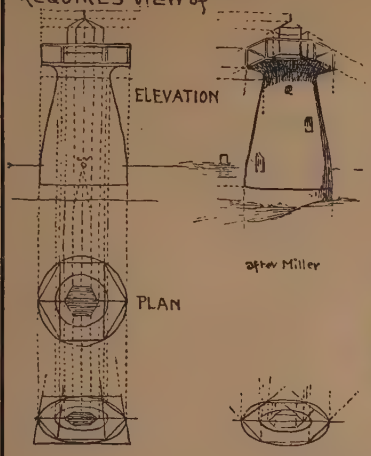
or (mixed with Black) a "Dark-Tint" or "Shade."

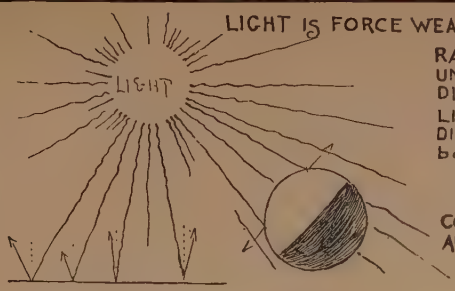
Black and White, mixed and graded together, give a scale of Gray.
Black and White are *complementary* to each other;
Black and White, separate, *imply* each other;
Black and White, together, *heighten* each other, the Enhancement being greatest where they are *nearest*.

A strange optical phenomenon is noticeable of them, which corresponds to that explained later

CHART XXV.—PERSPECTIVE

PERCEPTION of SOLIDS FOR CONSTRUCTION in INDUSTRY REQUIRES VIEW of





LIGHT IS FORCE WEAKENING AS IT PROCEEDS

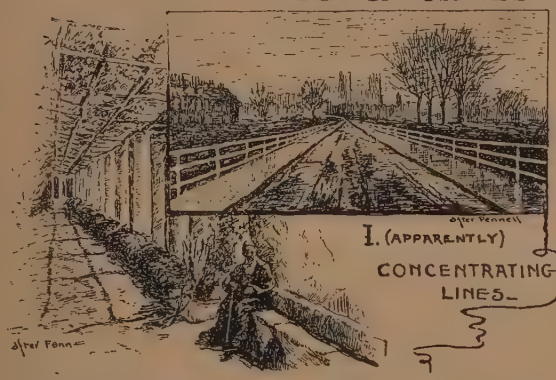
RAYS MOVE IN STRAIGHT LINES UNTIL REFLECTED—REFRACTED—DISPERSED — ABSORBED—

LIGHT PENETRATES UNEQUALLY DIFFERENT SUBSTANCES which become TRANSPARENT TRANSLUCENT OPAQUE

COLOR IS PRODUCED BY DISPERSION AND ABSORPTION—

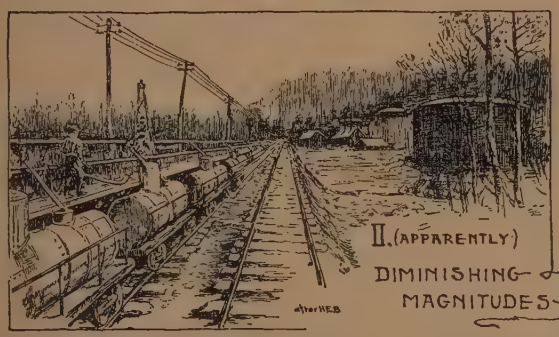
SHADOWS ARE DETERMINED BY THE CONSTRUCTION OF THE OBJECT AND POSITION OF THE SOURCE OF LIGHT.

OPTICAL RULES of AERIAL PERSPECTIVE



I. (APPARENTLY) CONCENTRATING LINES

IV. DIMINISHING FORCE of COLOR



II. (APPARENTLY) DIMINISHING MAGNITUDES

V. DIMINISHING FORCE of CONTRAST

VI. DIMINISHING DETAIL

III. DIMINISHING FORCE of LIGHT

about complementary colors. For if a black object is viewed steadily on a white surface, and then the eye is suddenly shifted to a white surface, the above object will reappear (spectrally) to the eye, but *white* now and surrounded by a gray border or aureole. While, vice versa, if the object were first white, upon a black surface, and then the observer turns suddenly away to a black surface, the same object reappears (spectrally) but *black* now, surrounded by a gray aureole.

This spectral effect, within the brain, would also occur if the object had been colored. Only then the eye, after looking steadily at the colored object, and turning away, would find the object's color changed to the opposite (or complementary) color, as arranged in our frontispiece Chart of Colors or the Color Chart, page 343.

This seems due to the mind's intuitive obedience to the principle of Balance or Equilibrium (elaborated elsewhere). It demands the opposite sensation from that with which it is surfeited, and seeks the rest of its full truth. If not supplied with that opposite complementary, objectively, the mind will strive to supply itself subjectively (or spectrally) and, so to speak, become "prejudiced" toward the complementary, suffusing all objects with its spectral aureole.

The need of the soul seems to be for Unity and Totality of Truth, and, when not fed fully, it is hungry for the absent fraction. It experiences a mental relief and delight at any such new discovery, and the eye immediately translates such optically. Hence the mind's pleasure in Complementary Colors, and its spectral or spiritual effort to conjure them up.

When mixed together (prismatically) two complementary colors make white light. As also would the three prime colors so mixed.

Prismatic colors are those into which a *triangular* prism of pure glass divides white light, and are the same that a perfect rainbow reveals in its "Bow-of-promise." Our colored frontispiece presents these in their proper relations, giving first the Three Grand Prime Colors, Blue, Red, Yellow; as from these all others are derived. Next between these come their secondaries (and, after these, their tertiaries, etc.)

There are said to be *three* nerve ganglia between the eye and brain, which are separately sensitive, one to the blue, the other to the red, and the third to the yellow influences; and, as their functions combine with the brain and optic nerve to welcome in all light, so they derive supreme pleasure in color when *all* elements of white light are harmoniously active, or implied. But the brain resents as discordant the absence or overstrain of any essential element. Certain it is that very decided characteristics or personalities, wholly incapable of mutual substitution, inhere in each of the Three Great Prime Colors, just as in the Three Prime Forms, and are largely explained, as we shall see, by *kindred* Principles and Correspondences.

1—BLUE is essentially basal, cool, calming, reflective.
2—RED is essentially warm, impassioned and exciting.
3—YELLOW is essentially brilliant, cheerful, luminous.

Of these qualities we spoke more fully on pages 95 and 96.

In art they distinctly correspond to, and reflect, psychological moods and even physical conditions presented by the forces and relations hitherto considered (in Chapters IV., V. and VI.) Not only does modern life now begin to recognize and apply (practically and forcibly) these influences, for private and public benefit in homes and parks, but for preventive or remedial service in hospitals and sanitariums. Qualities of sound in music, and of color in sight, are both found closely connected with the health of soul and body. We have long been subject to this law, without research into it or comprehension of it, and so have suffered from our ignorance.

In professional use

1—A "cool" color is one in which Blue predominates.
2—A "warm" color is one in which Red predominates.
3—A "brilliant" color is one in which Yellow predominates.

We find that color phenomena may be classified

under the same Three Categories as Form is; and guided, in the matter of agreement, by the same Three Great Principles of

1	Unity
2	Balance
3	Variety

Color effects are found to be chiefly

1	Simultaneous
2	Successive
3	Mixed

And to harmonize either, by

1	Analogy
2	Contrast in Complement
3	Many suffused in a Dominant

Thus, as we were explaining of adjacent bands of White and Black, that, when brought together and seen *simultaneously*, they "alter the apparent force of each other"; so, too, it is found that different shades of Gray will do the same (see Color Chart, page 343, Figs. 1, 2, 3, 4); and so, too, will different tones and hues of color. Simultaneous juxtaposition modifies both the tone and quality. (See same chart, Fig. 5. While viewing any of the tests on this chart it is necessary to cover the other colors on the chart with white paper).

The famous chemist-colorist Chevreul, of France, says: "When two contiguous colors are seen *simultaneously* they appear as dissimilar as possible, both as to their depth of tone and their composition of color." It seems a law with them to strive to give the eye all possible Compass in order to supply to the mind elements they do not find in each other. The light tone, or color, becomes lighter, but the dark darker. And if they are not complementary they strive to conjure up (spectrally) elements which will make them appear more complementary, and so more totally harmonious. That is, they *accent* their differences, in opposite directions, and move (spectrally) towards each other's complements.

For example, if Green and Blue are brought together, the Green throws its own complementary color (Red) over the Blue, making the Blue seem more reddish than when alone. And, vice versa, the Blue throws its complementary (Orange) over the Green so that the Green seems more yellowish than when by itself.

Another example would be, Violet and Red brought together.

The Violet throws its spectral Yellow over the Red, but
The Red throws its spectral Green over the Violet.

If they had been mixed together, they would only have come together in a new color hue, half way between each other, and a resultant of their proportioned strengths.

In associating two hues simultaneously, a primary should show plainly in each. For example, if a hue of Blue and a hue of Green are associated, the

{ Blue should be selected toward Violet, }
{ Green should be selected toward Yellow }

rather than be selected in hues too close to each other.

Blue should thus predominate in the Violet Blue.
Yellow should thus predominate in the Green Yellow.

In nearly all the best two-color combinations, it will be found that they are really complementary, though modified by additions of other colors, or Black, etc.

Two colors most accent and satisfy each other when absolutely complementary. Warm and cold colors, *simultaneously* juxtaposed, will likewise enhance each other's optical temperature.

The warm color seems warmer, by Conjunction.
The cold color seems colder, by Conjunction.

Under the category of "*Successive*" effects,

we refer to those in which the eye, having become well charged by long observation of one color or combination, will, on turning away to another color, bring over a spectral complement of the first color, and by regarding the new object (by a succession and not simultaneously) will, for a long time, change the new color in hue, tone and quality.

If, again, the surcharged eye now passes to still another color, or to several colors, we have the phenomena of "*Mixed*" effects, which may become more agreeable or less so, as the new spectral hues are concordant. This we see in ball-rooms and carnivals, where highly-wrought toilets or fancy-dress costumes violently charge the eye with complementaries, and end by a medley in which the whole may attain some sort of harmony.

BUT HARMONY itself may be directly attained, as stated above, by Three Prime Methods.

First. By preserving a sense of Unity, through more or less close ANALOGY, in the tones or colors employed.

For example, within simple monochrome limits, we unite different Tones of the *same color*, either gently graded or contrasted. Or, again, we put together closely related colors (such as Blue and Green; Blue and Violet, etc.), in their various tones, graded or contrasted with sufficient care not to be violent.

Secondly. By BALANCE and COMPLEMENT, between contrasted colors; as where two colors are absolutely complementary and, though strongly contrasted, yet supply all each other wants. Such as Yellow and Violet, Blue and Orange, etc.; or any group of colors in one section of our frontispiece, by those grouped in the rest.

In these, again, the tones may be made approximate, or skillfully contrasted; for the *depth* of a tone will sometimes directly change the result of a harmonic contrast in balance.

For example, Orange stands between Red and Yellow, and the complement of Orange is Blue. But if the tone of the Orange is chosen deep, then the Blue put beside it will tend away (spectrally) toward Yellow, in order to keep its optical balance; and we should choose a Blue, in that case, which actually has a lighter tone toward Yellow in it.

Had we, in the last example, first chosen the Orange of lighter than normal tone, thus tending it toward Yellow, then the first Blue would have reversed its apparent cast, and gone over (spectrally) toward Violet in order to suggest a darker tone of itself. So now we should choose a Blue which had this Violet element incorporated, or in some fashion supplied to it, as by ornamentation. (See Color Chart, opposite, Fig. 7).

These optical illusions are sometimes quite startling, and can be easily verified by the student.

Let him cut a small disk (say two inches wide) of any colored paper (preferably a strong prismatic color) and lay it flatly on a white page. Put a small black spot as big as a pin-head in the middle of the disk, and gaze steadily (without much blinking) for a minute or two, at this central spot in the disk. Then pass another white paper slowly over half of the disk, and soon one sees the spectral complement fill out the covered half of the circle, so that now one-half the disk is the first color and one-half is its complementary.

If we should take two disks, one of the original color and one its complementary, and put them on the white page, about two inches apart, and have a black point just midway between the disks; then, letting the eye alternate slowly from the middle of one disk to that of the other for some time, and then stopping suddenly over the black point just between the disks, we would see there a white disk with a gray aureole border around it! For the color and its complementary have now combined in a white-light disk, for total unity. Should we now remove either disk (or cover it with white paper) and after gazing at the remaining one awhile, look at the spot where the other was, we will find that its *specter* has returned!

Should two disks which are *not* complementary be put down on the white paper, as before, with a black point between, as before, and if the eye alternates between these disks for awhile, and then looks at the black point between, we will now not find the spectral white but a spectral disk composed of the *combined* complements of the two disks. So that, if the disks were respect-

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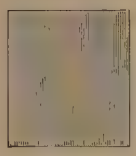

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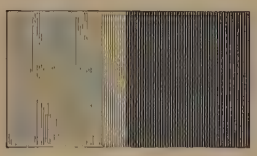

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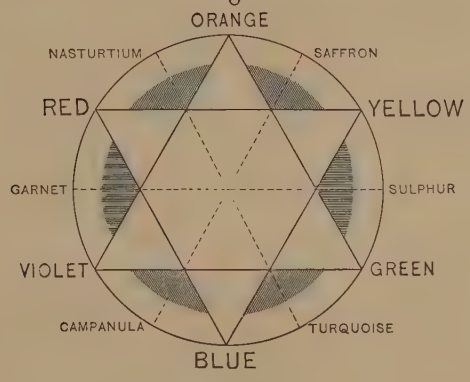

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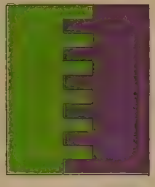

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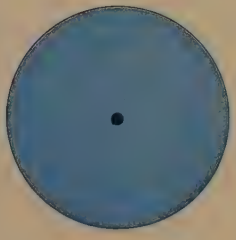

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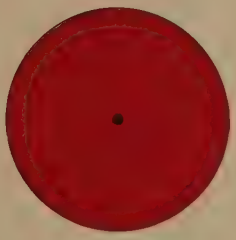

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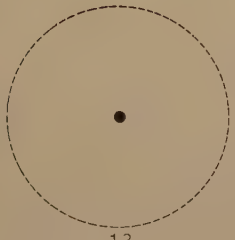


14

ively Green and Violet, the spectral disk would now seem Orange (a mixture of Red and Yellow which were the complements of Green and Violet). The accompanying Color Chart enables the reader to test these examples by placing a sheet of white paper over the other colors.

Thirdly and lastly. A DOMINANT color may, like an atmosphere, be *cast over* or *suffused through* several colors, and so harmonize them. As when they are seen through a glaze or a stained glass, or a strongly charged twilight, moonlight, etc. This is often resorted to by artists like Titian, Correggio, Rembrandt, etc., who deliberately select a dominant atmospheric hue, or tonality, in which to drown and blend all their colors and forms, within a special canvas.

Textile workers, especially among orientals, and good interior designers, printers, etc., will often utilize this device for Harmony, by their backgrounds and papers, in order to control and harmonize their overlays.

For this purpose pleasant Grays are often employed, for they are most sensitive and quick to accept (agreeably) the spectral tones cast on them by adjacent colors.

Bright colors are the slowest to respond to spectral influence, though all colors obey this principle to some degree.

Gray makes a good combination with the upper scale colors between Green and Red, and especially with Yellow; and, also, where two colors adjoining Gray are complementary to each other, or are nearly complementary. Gray helps to hold their harmony by analogy. But Gray is a little dull between very luminous colors, and in this conjunction may be inferior to White or Black, as an auxiliary.

Primary colors gain more than Secondaries by juxtaposition with White or Gray; and the brighter primaries, like Yellow and Red (and Orange between) gain great virility by contrast with Black.

White *heightens* tones of contiguous color.
Black *deepens* tones of contiguous color.
Gray most holds, at *normal*, tones of contiguous color. (See Chart, page 343).

White goes well with all Primaries; but Black goes especially with luminous ones where harmony in contrast is sought, for it loses its own depth when the contiguous color to it is deep or cold. Black seems to absorb away some of their force, though the cold color may be lightened by White enough to counteract this suction of the Black; and fine harmonies by analogy may be secured with Black if the complement of the associated color be actually mixed into the Black, instead of trusting to the spectral overcast alone. This help, by "mixing in a color's complement," is true also with Gray. The Gray is helped and also the color associated with it, when we mix into the Gray the complement of the associate color. Gray also enhances either White or Black, when associated with them, and it softens the opposition between them.

$$\text{The} \left\{ \begin{array}{l} \text{White deepens the Gray,} \\ \text{Black lightens the Gray,} \end{array} \right\} \text{by Contrast.}$$

But two tones of Gray beside each other, weaken each other as a whole, though their contiguous edges would be fortified. (See chart).

In general, colors that are *not* in harmony, by Analogy or by Contrast, should be helped to closer harmony by intervening agents (such as White, Black, Gray, Gold, etc.), or still better by a color which is their composite, or that approximates their complementaries.

Three-color combinations are pleasant where two of the colors are themselves complements and the third is a mixture of the two. This principle we see is distinctly parallel to that in family life, where the father is a *complement* of the mother, and the child (as a *composite* emanation of both) still further *binds their harmony*. And another similar principle of Balance or Equipoise is illustrated from the same family group, which we notice also in these colors. For if the child is a boy, and so disproportionately emphasizes the male influence in the group, an instinct arises to *enhance* the female in her own direction and sphere. Or vice versa, if the child is a girl. So, in the color combination just quoted, if Blue and its complement Orange are conjoined, and we

push the hue of the Blue to the right toward Green, then we will help Harmony if we push the hue of the Orange to the left toward Red, to the same extent.

It is precisely as if we had a compass needle upon our frontispiece Color Chart, and swung the needle on its central pivot, to the left or to the right. Then the opposite extremes of the needle would always move correlatively, and the same number of points, about the circle—whether swung to left or right.

The same principle of Equilibrium holds good with three or more colors in harmony; for if we swing the color to the left ~~or~~ right, the others should follow *proportionately*—as the compass needle would if it had *three* equal arms instead of two. Any such groups of harmonic colors may be collectively

{ *Raised* together with White;
Darkened together with Black;
Modified together with Gray. }

Backgrounds may be made harmonic to their overlays by the same three great principles above laid down, of

{ (1) *Analogy* by approximate tints,
(2) *Contrast* by complementaries,
(3) *Dominance* by suffusion of one; }

or by more than one of these combined.

THUS far we have spoken of Color in the pure or prismatic terms, because these alone give the primary conditions and principles in solar radiance or white light. But our commercial and artistic colors being made of many and varied materia, which are *non-luminous* expedients, we cannot get from them all the color phenomena which a prism would give.

Prismatic complementaries, when mixed, would give White; which pigment complementaries will not do, but rather blur each other down to Grays. Thus the prismatic Green and Violet, when mixed, would give their intermediate pure Blue, but in pigments they only give Olive. This change to a mixed hue is often noticed when two such colors are let into each other by a zigzag or overlaid pattern, as in the Color Chart, page 343, Fig. 8. A waving flag will often accomplish a kindred result with its ribbons of color.

But with these minor drawbacks, inevitable to our painting with earthly matter instead of rainbow pencils, the Principles we derive from God's celestial palette are the same in essence that we are to observe on our terrestrial palette.

LESSON XXV.

OIL COLOR

(See Chart XXV. and Color Chart, page 343)

THE ART STUDENT, after securing a good knowledge of Construction, Form, Light and Texture, should practice his eye for Color, and his hand for laying it on deftly, by studies in Water Color for flat decorations, and from the more flat of the colored surfaces in Nature, such as leaves, walls, fields, etc.

In handling Oil Color for itself and its own beauty, let him not forget that Blue is associated with the more sober, somber and cooler quarter of the palette and with "tonic" tones; Red is warmer, more active and more passionate in quality, and rises midway on the palette in its value in light; Yellow is the most sunny and brilliant, and ends the other extreme of the palette where it merges into White, and where "dominant" tones pass up onto the higher octaves. All Secondary and Tertiary colors, derived from these by blendings and overlappings, only harmonize or contrast these *inherent* esthetic Qualities of color first felt in the "Primes" themselves.

If, therefore, we were to set a good full palette for the study of Nature, we would put our Black at the left extreme and our White at the right extreme of the palette. Midway, between these, set the Red. Between the Red and Black set the Blue. Between the Red and White set the Yellow. Next to the Black set your Browns, then your Olives and Greens leading up to the Blue. Between the Blue and Red set the Purples or Mauves—that are born of their blendings. Between the Red and Yellow set the Orange or Cadmium tones—that are born of these two blended. And if any delicate tint of White is used, like "Jaune Brilliant," set it between the Yellow and White. If several shades of any color are used, such as "light and dark Greens," be sure to keep the dark shade toward the dark end of the octave, and the light shade toward the light end of it that your sense of "Values" by shade be not confused nor reversed.

Remember Black and White are not properly colors but rather elements of Gradation and Shade that may enter into and qualify any color. Indeed, in outdoor landscape, tender Grays (born of such blendings and qualified by all sorts of reflections) intervene between and soften all colors whatsoever, no matter how positive any color may seem in itself. A day's atmosphere must be very clear, or a color very near, to escape this toning and softening of aërial influence. In no case can color escape the varied Values and Gradations *of itself*, due to planes and "octaves," which form and distance compels it to take *by varying and tipping its angles toward the light.*

Hence it is wise for a student, beginning to use color in connection with form, to choose objects for study that have *simple colors* and *simple planes*, till their accurate association and gradation is sufficiently understood. The simply colored and simply diversified forms of plain garden vegetables, such as potatoes, onions, carrots, cabbages, etc., are excellent still-life models to begin with, because they also supply a natural quality to the color which otherwise might be crude; and they lend themselves easily to simple, broad but harmonic effects in the whole. Then let the student gradually raise his themes and increase his difficulties by studying flora, fruit, animal life; and at last associate with these Composition.

Abstract laboratory experiments, with chemical and actinic effects, are modifying the commercial use and combinations of color in various ways. Yet for the practical artist-poet, *using the palette for distinctly esthetic results*, the Three Prime Colors long attested by ancient art and retained by the famous director of the Gobelin tapestries,

and by Blanc, Brewster, Earhart and others, are (when expanded as in our frontispiece) the most flexible, sympathetic and complete arrangement we can give for professional help.

No nobler, richer and more resonant palette of infinite symphonic and orchestral scope can be set for a full composer, than the following oil colors—when secured of any safe and reputable manufacturer.

1	BLUE	Cobalt
		Permanent
		Ultramarine
	GREENS	Light Zinober
		Middle Zinober
		Dark Zinober
	OLIVES	Terra Verte
		Raw Umber
	BROWN—Van Dyck	
	BLACK—Ivory	
2	REDS	Chinese Vermilion
		Scarlet Lake
		Carmine
		Burnt Sienna
	PURPLE—Lake	
	ORANGE—Deep Cadmium	
3	YELLOWS	Naples
		Chrome
		Ochre
		Raw Sienna
	WHITE—Silver	

Among these we find THREE PRIMARY HARMONIC CHORDS of great difference in range:

	FIRST CHORD DEEP AND RICH	SECOND CHORD MIDDLE AND TEMPERATE	THIRD CHORD HIGH AND COOL
For YELLOW, . . .	CADMIUM	YELLOW OCHRE	NAPLES YELLOW
For RED, ...	CARMINE	SCARLET LAKE	VERMILION RED
For BLUE, ...	ULTRAMARINE	PERMANENT BLUE	COBALT BLUE

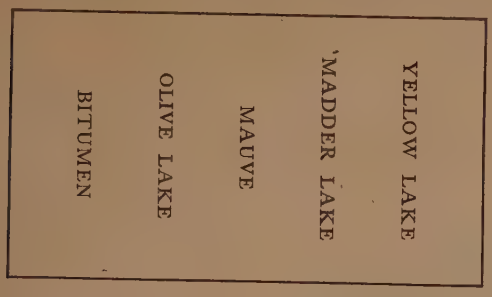
The first column gives a deep, rich, powerful and tropical gamut, like Venice and Spain.
The second column gives a temperate and medium gamut, such as we find in France.
The third column gives a high and cool gamut, appropriate to northern countries.

If we were painting in the { tropics or orient, the 1st / temperate lands, the 2d / northern lands, the 3d } column of primaries would best "key" our palette.

With each of these Chords we may, of course, set Secondaries, or Tertiaries, on our palette, but should be careful to select them as harmonically as possible to the set of Primaries chosen. Thus there are colder or warmer, higher or lower, Greens, etc., which we would naturally select to go, respectively, with colder or warmer primaries, to keep our chords more justly and easily harmonic.

Underneath these we find it helpful to hold a few Transparent (or undertone and shadow) Colors, which should be placed at the bottom of the palette to offset the full scale first given. They should be used *thinly*, and with discretion, as in preparatory undertones, or scumbles and stains employed sometimes in process to soften or blend surfaces, for these transparent colors are

not "body" colors with solidity of pigment, and if so used heavily will not dry easily. These are:



With this palette all the glories of earth could be portrayed, and, I think, some of the supernal ones of heaven!

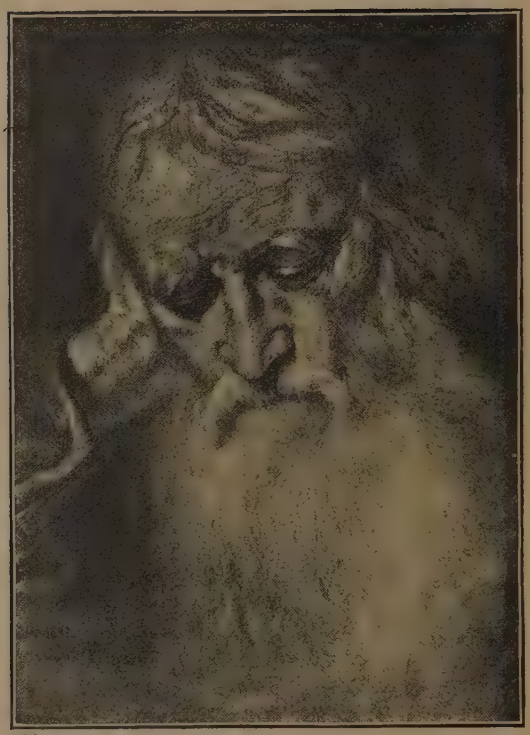
But, let the student remember that he is not always nor often called upon to employ an orchestra. More often the themes he will select, or that he will find about him, are modest idylls, individual solos, quiet melodies and perhaps tender minors that may be just as sweet—if not quite as impressive—as majestic epics or sweeping symphonies. Schumann and Schubert may be, at times, as welcome as Beethoven or Mozart. For such less comprehensive themes, a *few* colors selected from the above list with special reference to the more limited task, may answer best, just as fewer strings and lighter implements do for specific soloists.

Let the student begin, at least, with flute and violin, before he essays to grasp the compass of all instruments in a vast Harmonic Unity.

For the dexterous tricks of brush, or clever use of palette-knife in preparing or suggesting special diversities of Texture, he must trust to patient practice and the experience of older workers. But let him never degrade his subject into mere technical dexterity alone, nor forget that *native power of Vision and depth of Feeling* is the only force that can make him a Master or raise him to the planes of Original and Grand Composition.

There is nothing more pitiful than to see a young soul, of natural capacity and noble aspiration, destroyed or perverted by little "posers in paint"—speculators in technical "stunts"—who have no breadth to grasp Nature's Soul nor vitally guide the spirit through her wealth of infinite inspiration. Let the student, at least, *develop himself, fill himself with natural beauty, cling to organic and patient Self-development*, nor ever utter a word he does not *feel*, nor portray a scene he has not *sympathetically comprehended.*

So, along holy and sincere lines, the Gods who created Cosmos and who know the hunger of every human heart, will slowly but beautifully develop some song of sweetness or inspiration *for your own soul;* and out of that very alembic of modest purity and observation, combined with reverence for her Laws and Principles of Life (in every creature and in every master creator), will come a depth of feeling and appreciation which is the surest guarantee of refinement or grandeur in *original* conception and execution.



Titian, Pinx.

HEAD OF AN OLD MAN

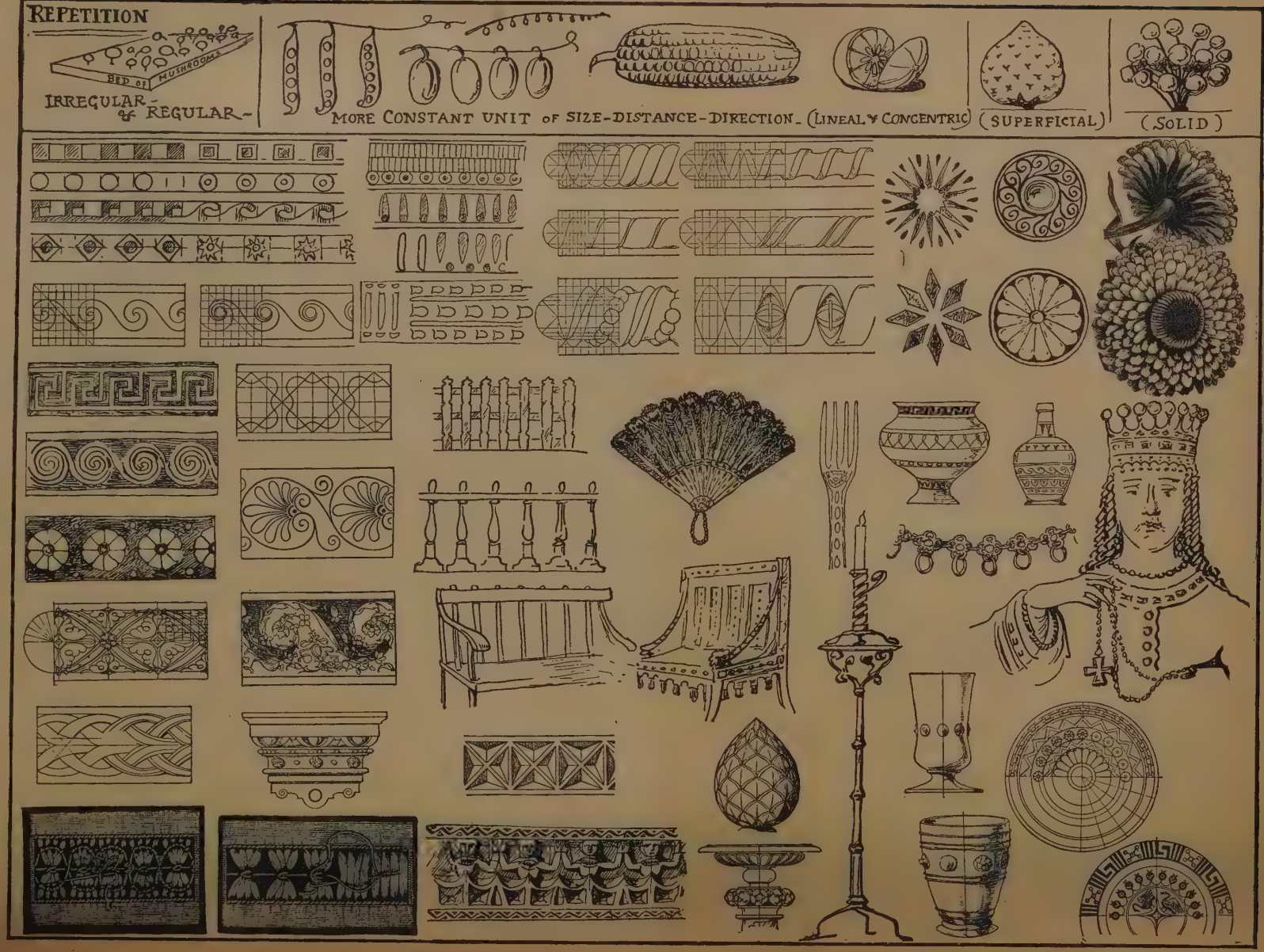
CHAPTER XIII.

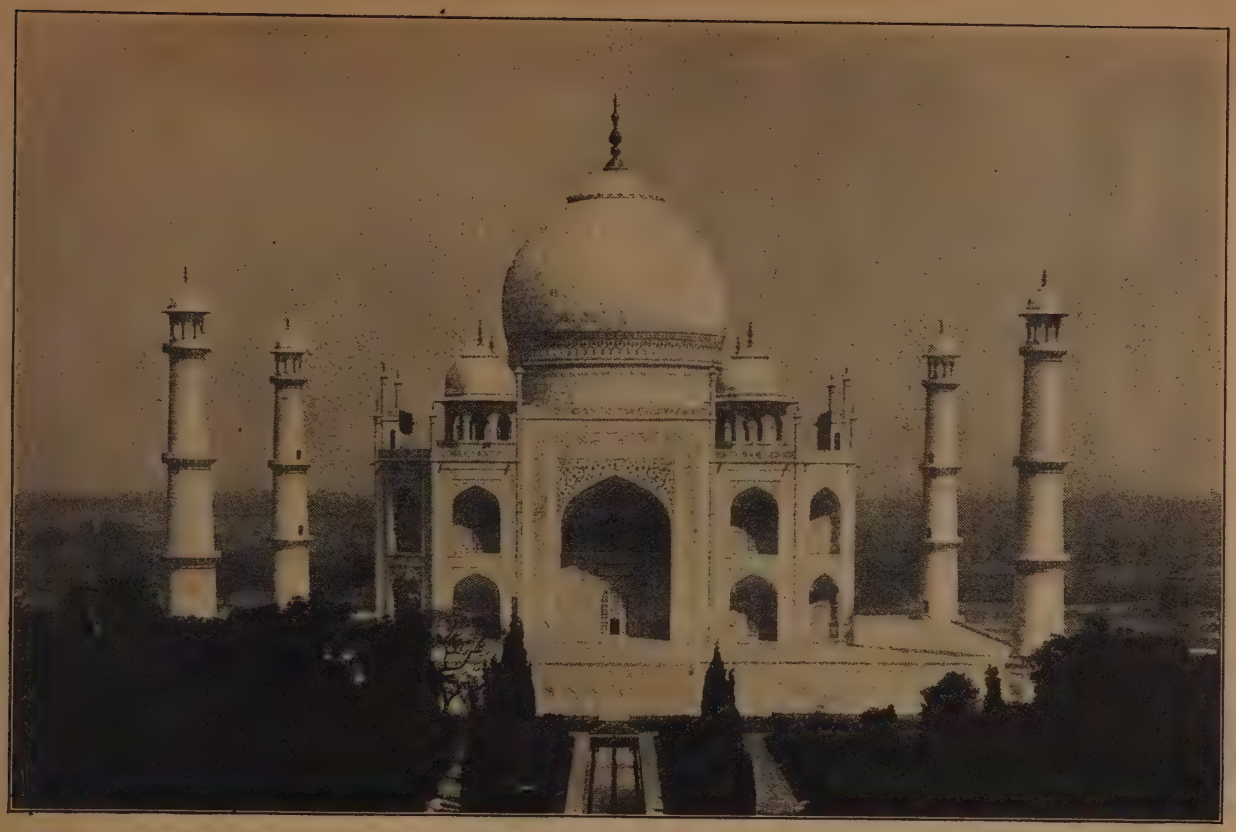
DECORATIVE PRINCIPLES, METHODS AND ADAPTATIONS

"THE Beauty of the Lord our God be upon us: . . . yea, the work of our hands establish thou it."

—*David.*

CHART XXVI-(*a*).—REGULAR REPETITION





THE TAJ MAHAL

AGRA, INDIA

DECORATIVE PRINCIPLES, METHODS AND ADAPTATIONS

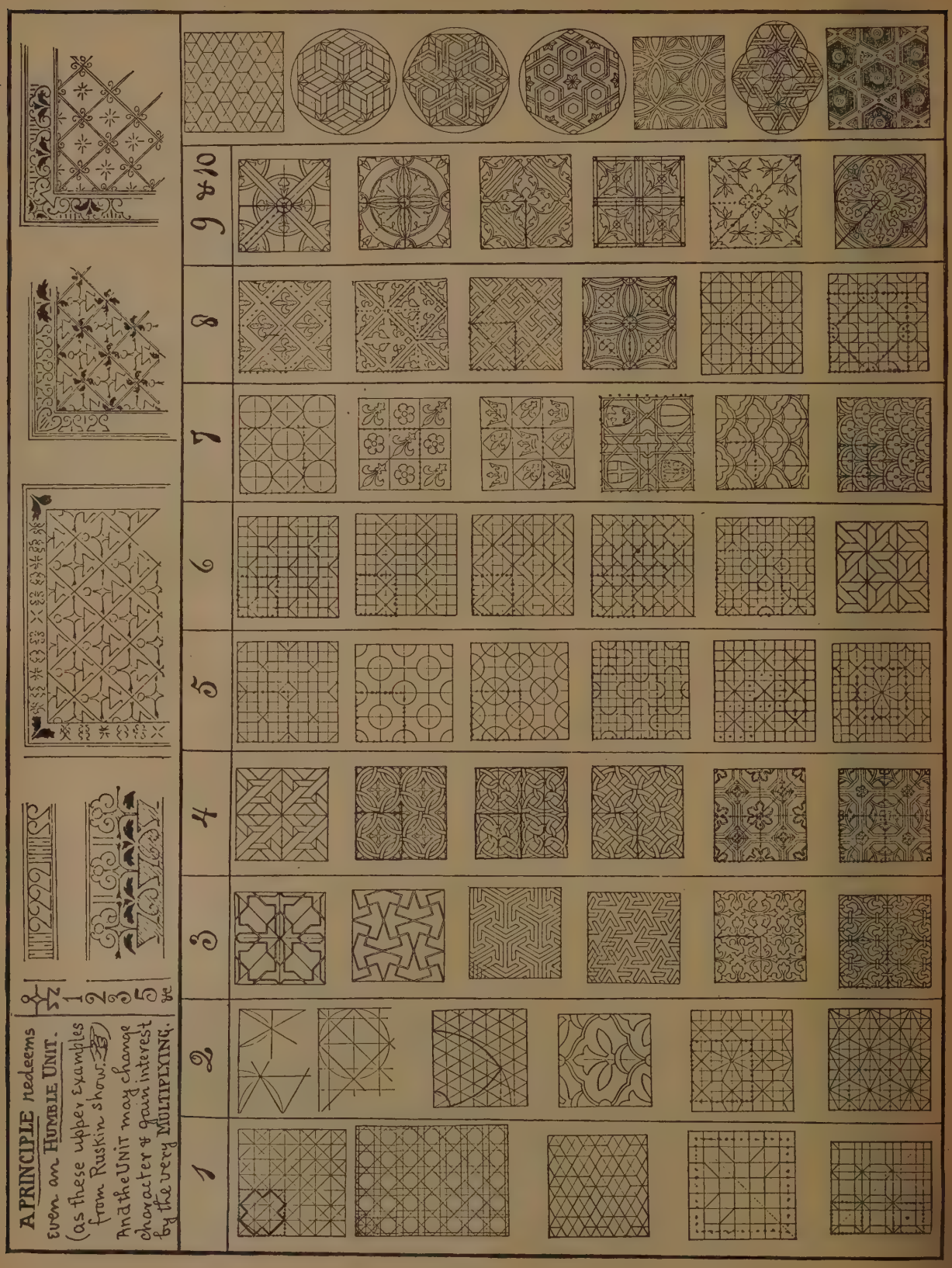
LESSON XXVI.

PRINCIPLE OF REPETITION

WE HAVE previously noticed (in Lessons VI. and VII.) how the mind and eye enjoy the Reiteration and Regular Repetition (in lineal, surface, or solid effect) of any satisfactory unit selected, whether in form, size, distance, color, movement, etc. The sense of Regularity is agreeable in itself, carried up to a certain point and measure of satiety and sufficiency, after which the mind enjoys and insists on change or contrasts.

Nature herself is here seen to give us abundant examples in her art of the Principle she has set for ornamental charm. A group of mushrooms springing irregularly in a bed please by their similarity of type-form, but their chaotic sprinkling and irregular size is not as ornamental as in the pea, bean, corn, etc., where a more constant sense of Unity is introduced in the size, distance, direction, color, etc. (See Chart XXVI–(*a*).)

We show, by several examples, adjacent to these, how quickly human art has caught this principle and applied it broadly and familiarly on objects of use and beauty. The student will find it on all sides about him, and he should notice, *the Reasons of things pleasing him*, and what intellectual Principles produce the pleasure, or his art education remains blind, perfunctory and uninspired. It leaves him, like the mole beneath ground, capable perhaps of a groping and hazardous existence, with no eyes to see the day nor aspiration to attain it. A hawk may soar with-


A PRINCIPLE redeems even an HUMBLE UNIT.
(as these upper examples from Ruskin show)
And the UNIT may change character & gain interest by the very MULTIPLYING.
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9 & 10

CHART XXVI–(*c*).—GENERATING PATTERN

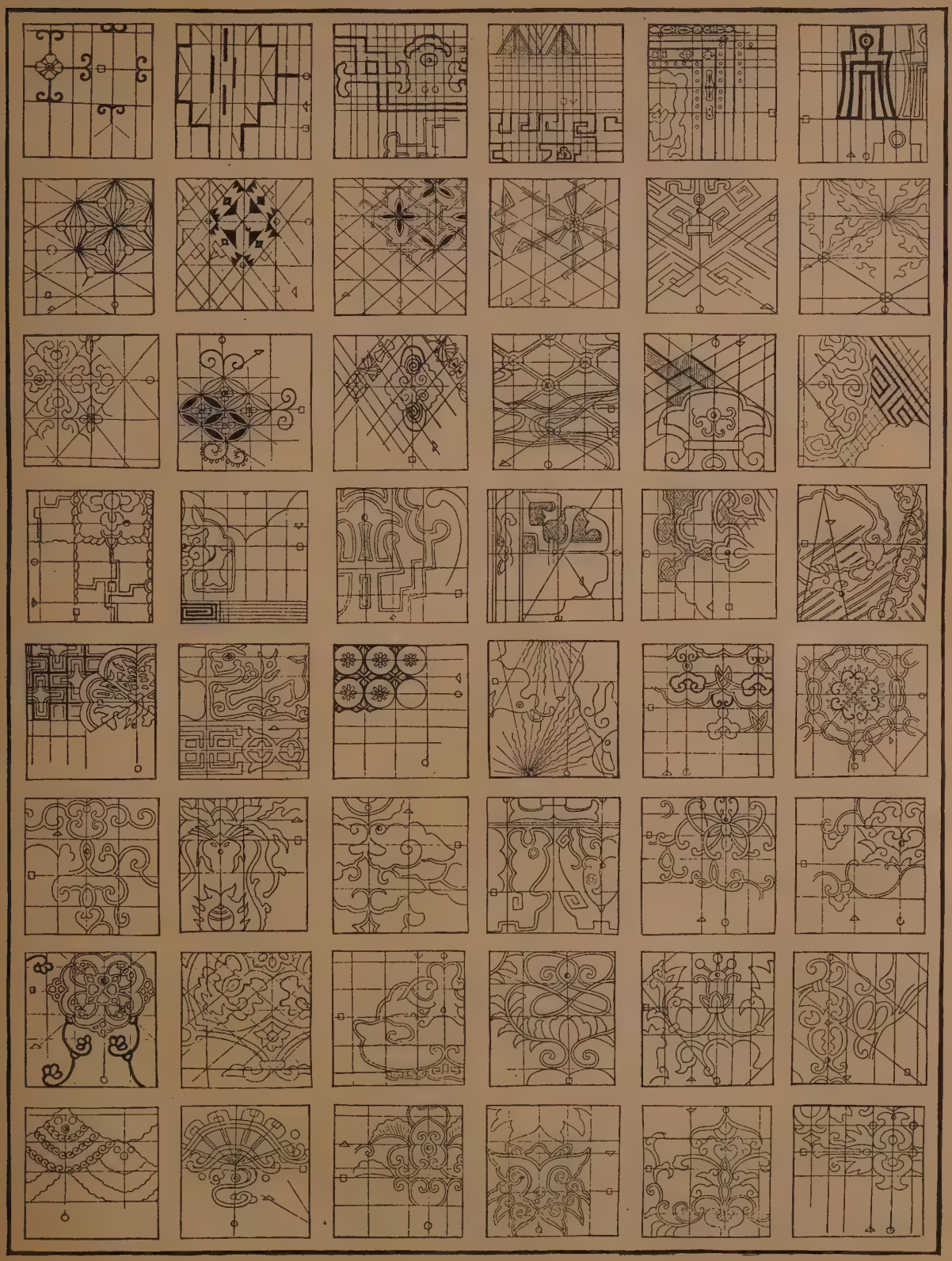


CHART XXVI-(*d*).—GENERATING PATTERN

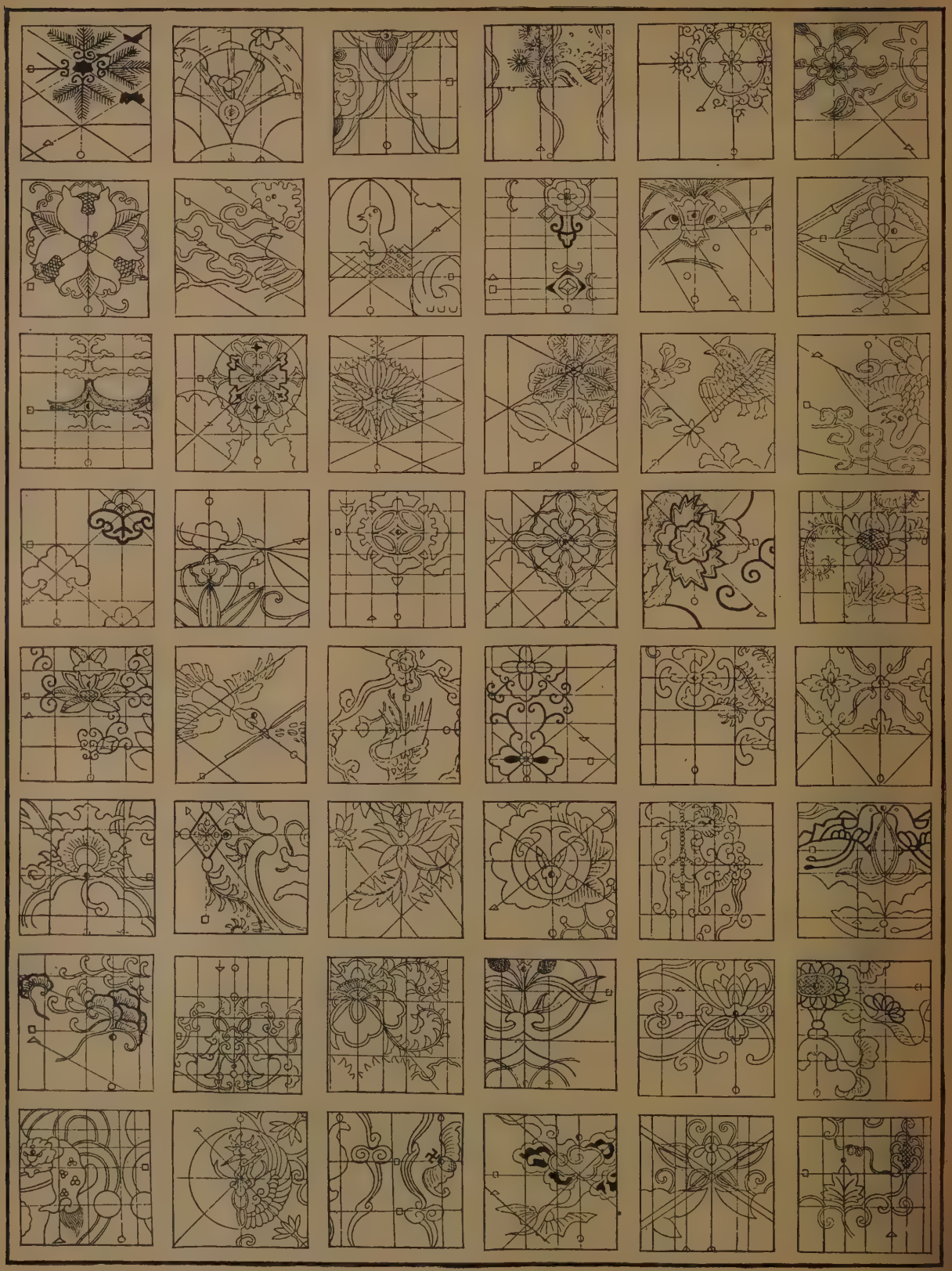
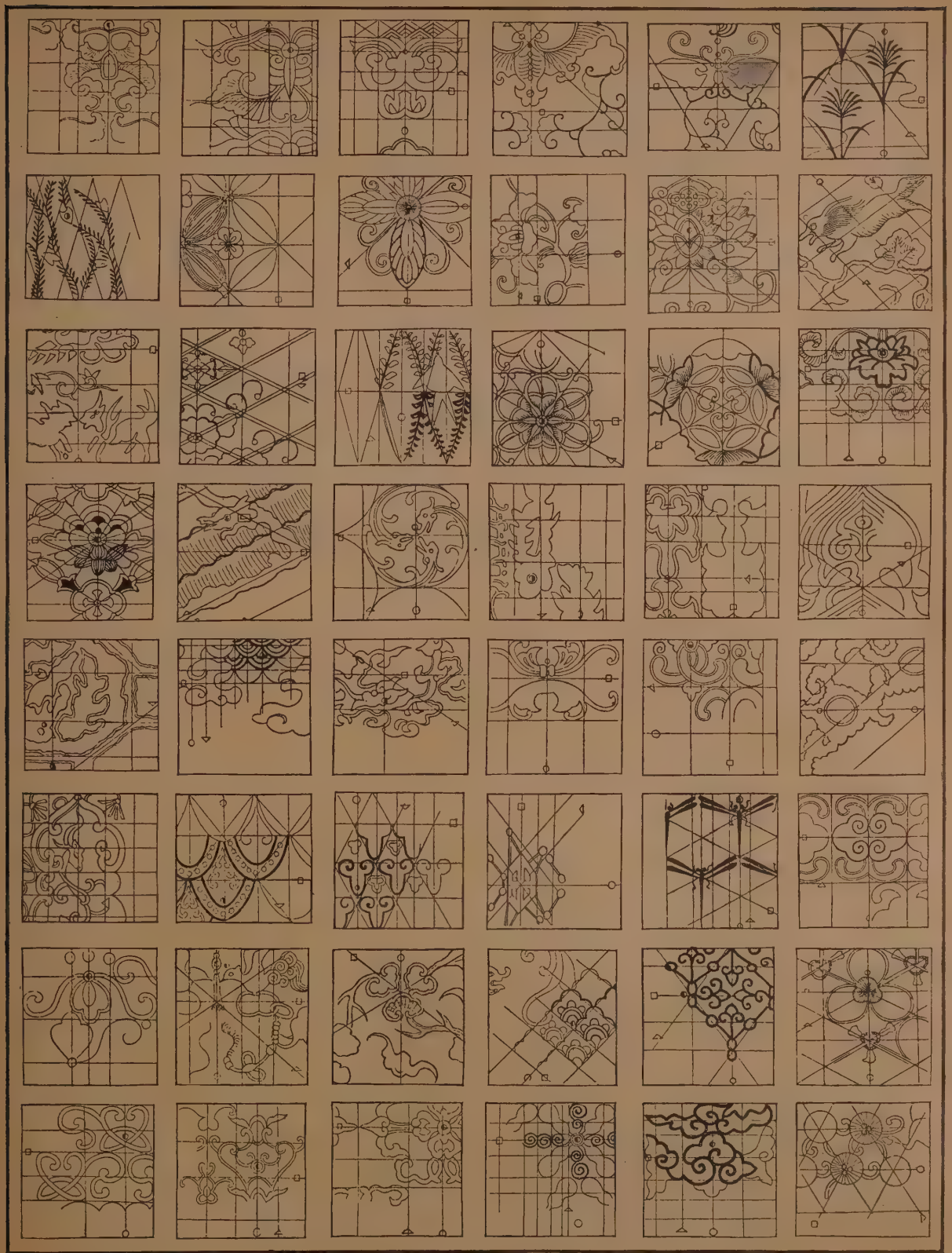


CHART XXVI-(*e*).—GENERATING PATTERN



out knowing the *law* of Balance that sustains him, but the astronomer Newton discovers that a divine and eternal bond is linking heaven to earth and to every resplendent sun, and so enables his own and other souls to comprehend and mount with infinitely more reverence and aspiration.

In the same way the examples we give next of "all-over" pattern (or the regular Multiplication of a decorative unit for surface embellishment) will show that *even an humble unit is redeemed by a true Art Principle* into beauty and delight to the eye. For, as Ruskin himself instances, even such rudimentary elements as are found in the ordinary numerals 1, 2, 3, 4, 5, etc., or any childish manikin drawing, can become ornamental by employing a decorative principle to redeem it, such as by regular Repetition, Multiplication, Reflection, Contrast, Alternation, etc.

Also, in Chart XXVI–(*b*)., we have arranged a few examples of multiplied units, for tile, stencil, wall-paper, etc., which will serve to show, in the first two columns, how stamps for such patterns can be generated and set; then, in the third column, how the unit intentionally loses itself into complexity and even change of character by the multiplying; then how, in the fourth and fifth columns, the tile would be the same, in resulting pattern, however turned about; while those in the sixth and seventh columns mostly require to remain *upright*. In the eighth column the corner tile generates new effects and figures by its multiplication, many of which often come to the design quite as surprises, and must be carefully anticipated or tested. In the ninth column these new figures are generated by the revolving of the corner tile about a center; or a pierced triangular stencil could reflect itself and so get the same effects for the whole pattern. In column ten, hexagonal and circular bases are well employed in the Repeat.

The next three following pages of charts—XXVI–(*c*)., XXVI–(*d*). and XXVI–(*e*).—are all most valuable and interesting experiments, from the Japanese working in the same direction, that will lead the student gradually to greater freedom and play in pattern formation.

LESSON XXVII.

PARALLELISM

(See Chart XXVII.)

THE PRINCIPLE of Parallelism is an element of Order in the moving of all force, and hence becomes an element of Beauty in ornamental design. It is manifested decoratively on all sides of us in Nature, in climbing smoke and steam, running water, grains of wood, growths of vegetation, structures and hides of animals, or loosely hanging robes and pendants wherein gravity may freely act. It is caught up quickly by historic art work, in a thousand ways that one sees daily about us, and which the student can discover for himself in every home. It probably owes its capacity to give us delight from the pleasure the mind experiences in noting a Constant and Harmonious Association between free units advancing—like friends walking together or soldiers marching together. They produce on the eye a sense of *steady* Progression at *equal* intervals, of units that retain individuality and *independence* while yet tending in a common direction—thereby implying a unity of influence and similarity (without identity) of aim.

CHART XXVII.—PARALLELISM

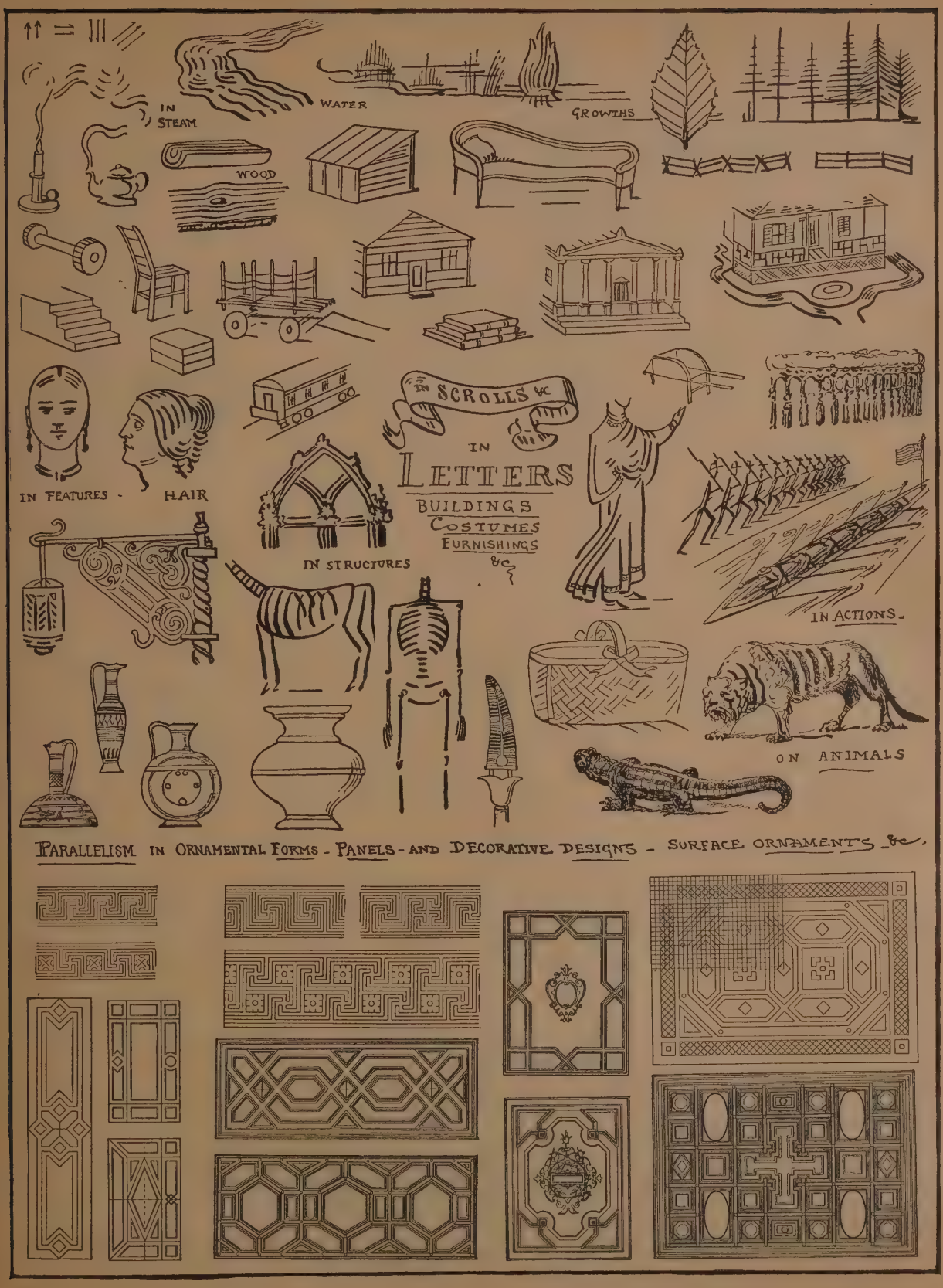
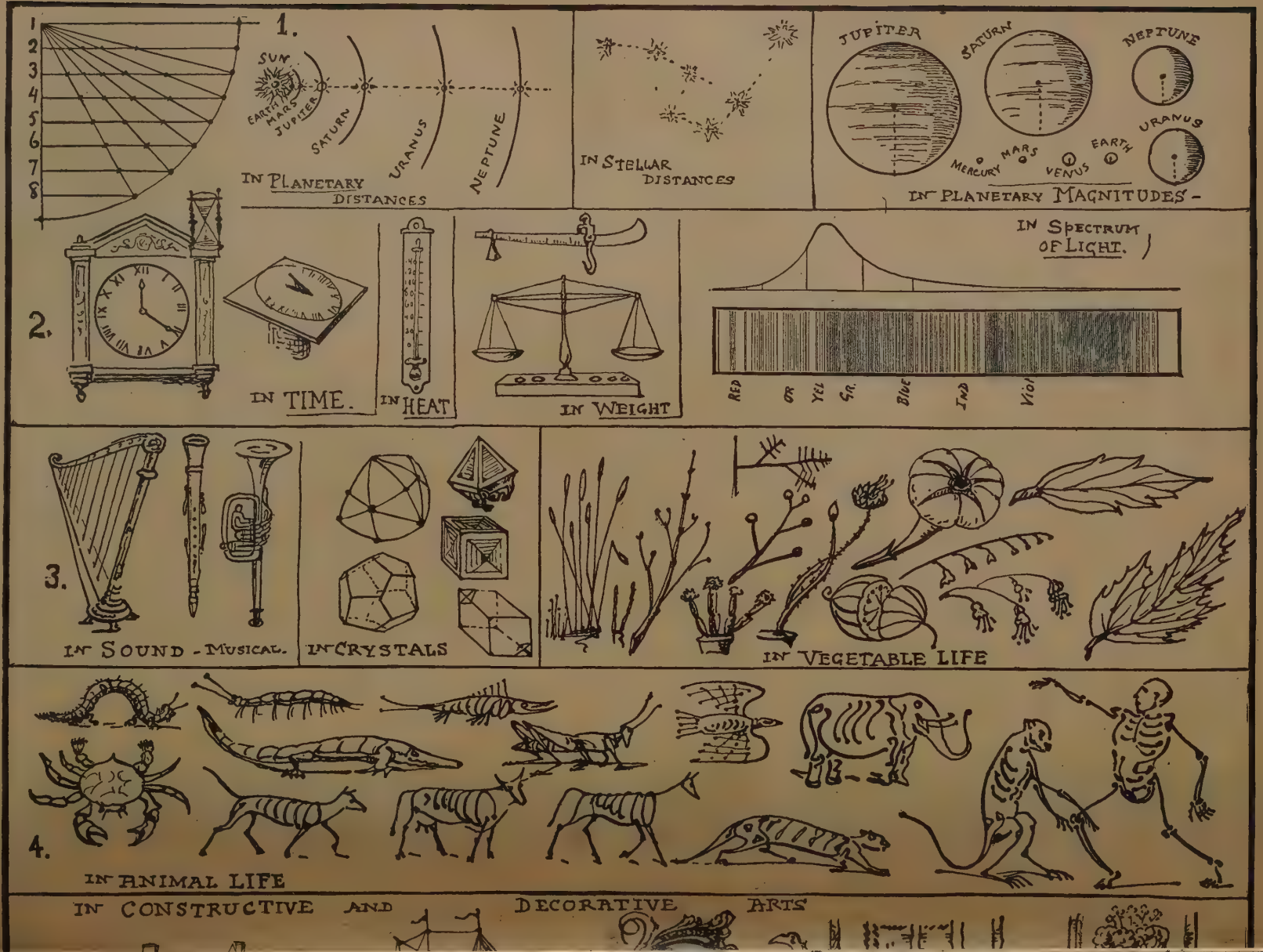


CHART XXVIII.—LIMITATION



5.
6.
IN OUTLINES - SIMPLE -
7.
IN OUTLINES - VARIED -
8.
accented Proportions
Forms STRENGTHENED -
Contents suggested

LESSON XXVIII.

LIMITATION

AS IN LESSON VII., we noted that Nature is everywhere bounded, measured, and controlled by a supreme Wisdom which *limits*, conditions and correlates her action and existence, for the harmonious and happy expression of Life; and that these Metric Relations cannot be violated without injury to life (physical or spiritual), so we find the same law penetrating the mystery of Beauty and its expression in Art.

It is the variety and arrangement of Measures, giving significance to the formulæ and equations of Life, that everywhere indicate the terminal stadia or points of definite limitation, divergence, completion, in the plans and constructions of divine or human will. And it is the detection of these (when adjusted to eternal principles of Appropriateness, and Efficiency to purpose) that contributes so powerfully to our delight in Beauty. As it measures

Space, for Distances;
Duration, for Times;
Gravity, for Weights;
Quantity, for Chemical Actions;
Vibration, for Sound, Heat, Light, etc.;

so, in Form and Color, it searches for Specific Measures to express Function or Character.

Thus the Division of an art unit becomes as important as its multiplication; and this may be regular or irregular.

We give a number of illustrations for the reader to note, among the infinite examples of life. (See Chart XXVIII.)

In geometry, a right line may be divided into as many equal parts as it is passed through equal spaces. (See first figure of this chart, section No. 1.)

While the beauty of an art unit is, then, so frequently enhanced by its Subdivision for embellishment, yet guiding principles should control these divisions and limitations into Meter or Artistic Measure.

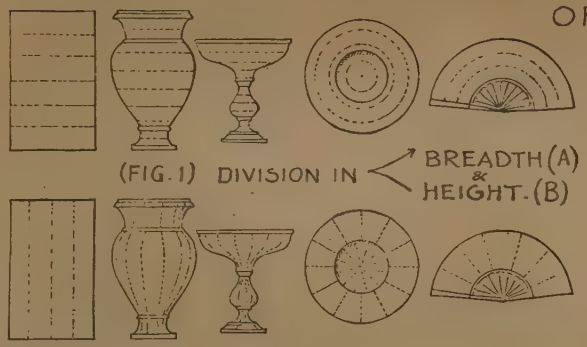
Thus, when the unit is simple in form or unbroken in outline, more equal and regular subdivisions of it may be agreeable; though these divisions can afterwards have variety in their contents or treatment. (See preceding chart of examples, No. 6.)

But, in units that are irregular in outline or broken by structure, the subdivisions for ornament should *accord* with these preliminary indications of Division, as in the preceding chart of examples, No. 7.

So, too, our divisions may be made to accept the beauty of Proportion, as in the preceding chart of elegant examples, No. 8.

Or they may strengthen, in appearance or reality, the structure of the unit; and even suggest its contents and uses, as with water-lines, floral movements and the like, as in the last examples of the same page.

ORNAMENTAL SUBDIVISION-



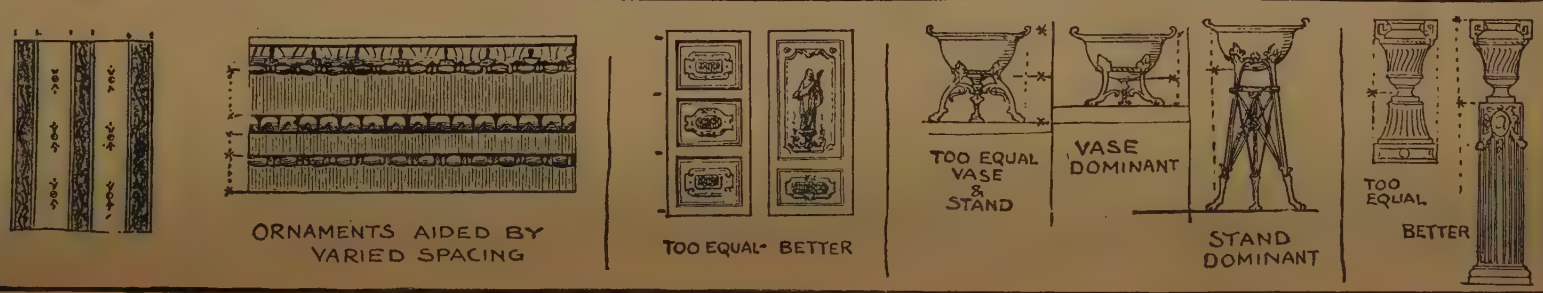
(FIG. 1) DIVISION IN BREADTH (A) & HEIGHT. (B)

SPACING TOO EQUAL

SPACING VARIED

DIVISION OF ART UNITS INTO TOO EQUAL ORNAMENTAL SPACES

DIVISION OF ART UNITS INTO MORE VARIED AND AGREEABLE SPACES.



LESSON XXIX.

MEASURE

(See Charts XXIX–(*a*). and XXIX–(*b*).)

IN THE latter part of the preceding lesson I spoke of the sub-division of an art unit into regular and equal parts or spaces, as remaining agreeable and free from monotony in effect, if only the ornamental members or contents thereof be sufficiently *varied.*

The necessity for play or change, as organic to the mind, was spoken of in Lesson V., together with the principle, here to be exemplified, of highest gratification yielded when these variations in the measures, members or ornamental elements, are bound together and unified again by underlying Law.

Thus (as suggested by Henri Mayeux, in Chart XXIX–(*a*)., Fig. 1), we notice that the division of the unit by many equal spaces tends to warp or expand the unit *in the direction of the Repetition;* and to monotony, if the spaces remain blank.

Even where these subdivisions are ornamented, or varied in character, as in the adjacent first upper row of this chart, the result is not as satisfactory as in the third and fourth rows, where the spaces are more varied and certain members made frankly *dominant* and controlling. The others can then be relatively *graded* or proportioned.

Thus, if we refer to the work of Nature in Chart XXIX–(*b*).—say in the one category of leaf measures—we can note how, even in the measuring and spacing of a single leaf, Nature manifests a constant disposition to control irregularity by Purpose, and to reveal by matter her intellectual Processes and Principles. Such as

Reflection,
Symmetry,
Balance,
Dominance,
Gradation,
Proportion.

Of these and others we shall proceed to give examples both in individual and collective cases.

Of course, in Nature and Art alike, it is a constant experience to find several Principles beautifully associated and harmonized.

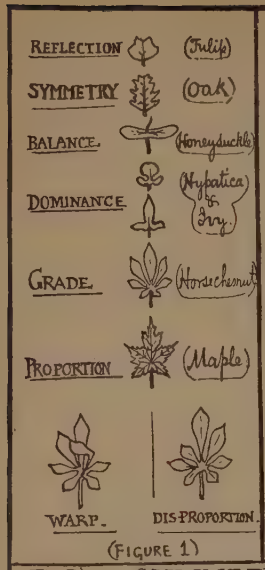
Thus, in the following example of oak leaf, the law latent in the structure is hidden by the great irregularity of the marginal measures.

In the tulip leaf, the principle of Reflection is clearly seen. Of this we give other suggestive examples in Fig. 2. The mind seems to take delight in contemplating any agreeable unit "upon both sides" (as we say) or with its spaces, measures and features exactly reflected and equally gauged off from a common central Standard Line.

This principle is very widely present in Nature and Art, and seems to be the more primitive and rigid phase of the grander and freer principle of Art Symmetry or Bilateral Similarity, and of Balance or Bilateral Equipoise. (See Fig. 3.)

In this latter principle a common central point of gravity seems substituted for the central line in Reflection, and hence all the parts and members of an Art Unit, or group, are freed to a greater degree, so long as they obey (by a common equilibrium) an art cohesion. Such cohesion is greatly augmented by any increased similarity of forms, growth, color, character, idea, etc. (See waterman, scales, plant, figures and escutcheons.) They are among the most general and fundamental principles in Nature and artistic composition.

In Fig. 4 and Fig. 5 are further examples of the principle of Dominance, referred to above as frequent in art composition when some controlling idea or important member of a group is enforced or *emphasized* beyond challenge from other associated ideas or members. Notice the *idea* of majestic flight in the eagle dominating the globe; the upright energy of the powerful lion;



(FIGURE 1)

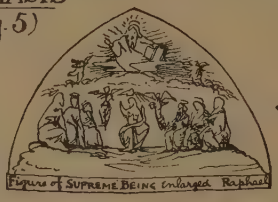
(Fig. 2) REFLECTION

(Fig. 4) DOMINANCE

Fig. 3) SYMMETRY
Bilateral symmetry (not identity) of Relations.

BALANCE

EMPHASIS
(Fig. 5)



graceful support in the caryatid; manly courage and Beauty supreme over brute force; light in the torch or candelabrum; watchful oversight in the campanile; grandeur in the dome, etc.

This element of Emphasis we find pushed to exaggeration occasionally, as in the half-symbolic pictures and carvings of the ancient Orient, and even in later statues and paintings of Greece or Italy. The dominant idea is forced to its extreme, or the aid from Measure augmented by other auxiliaries, such as strong color, concentrated light, etc.

LESSON XXX.

METER

(See Chart XXX.)

BECAUSE of the tendency to Exaggeration spoken of at the close of the preceding lesson, Nature seems to have established an overruling law of Proportion, by which the several members or subordinate measures of an Art Unit (or a cluster of units) may be correlated justly and apportioned their appropriate quantum of space or development in the general interest.

Sometimes this Proportion is secured in a severely mathematical way, by an exact Ratio established and maintained unchangeably throughout the measures (as in the first diagram, Figs. A and B; or in the grain, vegetable, shell-form, and human fingers, of the diagram just beneath).

Such regular Ratios may often be adjusted in ascending or descending arrangements for that "Crescendo" or "Diminuendo" which is such a constant factor in Nature's progressive stages of growth, and which makes such a charm in her shaded mountains and clouds.

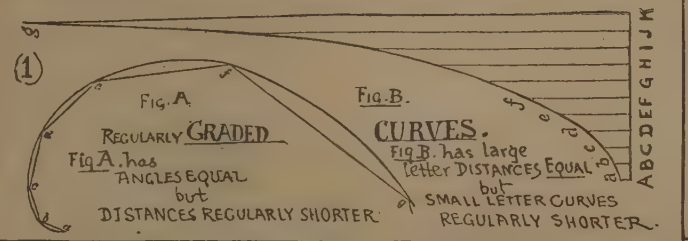
An example of this vast principle of Gradation is given, in its relation to light and color, (at the top of the second column, Fig. 4); and in its relations to form and ornament (in Fig. 3). All the examples of this latter figure are more or less regularly graded up or down in magnitudes, positions or elaborations. The lower examples (from the peacock down) show that phase of Crescendo-Diminuendo which, by involving *constant variety of Measure but constant unity of Form*, is aided by symmetrical Reflection to express perfectly regular *culmination and decline* (or vice versa, decline and culmination), and is termed "Anthemion" movement, from the leaf that classically presents it.

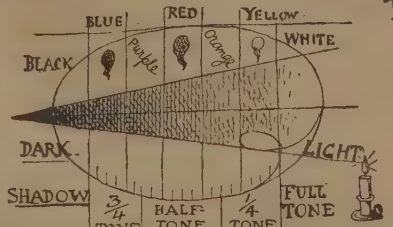
It is, however, in the highest forms of life and thought that we discover those more elaborate and complex measures so correlate to place, nature and service as to constitute the noblest Proportion.

This is seen in the quick satisfaction the mind derives (Fig. 6) from the varied but ever-*consistent and harmonic* measures found in the noblest types of animal life; and by the quick dissatisfaction it feels at (Fig. 7) those which *err* from them in any direction. While *excess of error* instantly conveys the impression of the ridiculous or absurd, which is the ground for the humor of Caricature. (See Fig. 8.)

This clearly shows that the Supreme Spirit has endowed man with a *latent Conscience* to cultivate and to perfect, in esthetics as in ethics; and has left for us only a few examples of Disproportion upon the face of Nature (as a dark "mouche spot" on the fair face of a belle, or as a note of discord in musical accords)

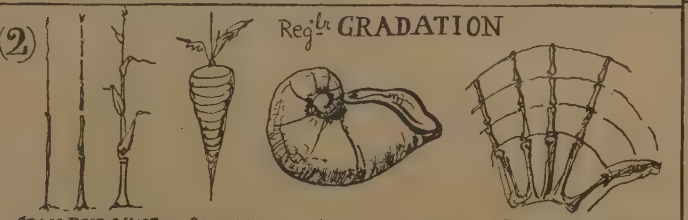
(1)

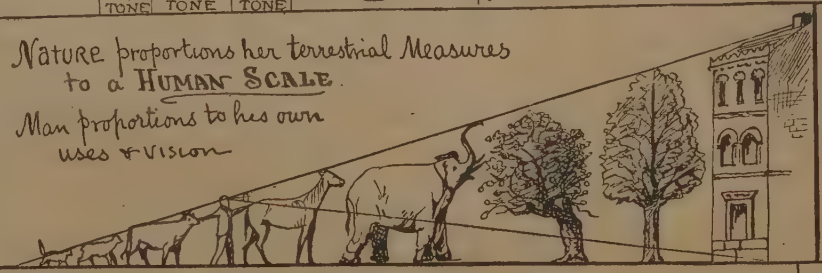




PRIMARY COLORS in GRADED ORDER
between extreme pigments of WHITE & BLACK
giving
Their INDIVIDUAL COLOR-VALUES
as related to corresponding
REGULAR GRADATIONS of LIGHT.
-as in Music
there are Octaves with minor notes; (4)
& TONES with HALF-TONES

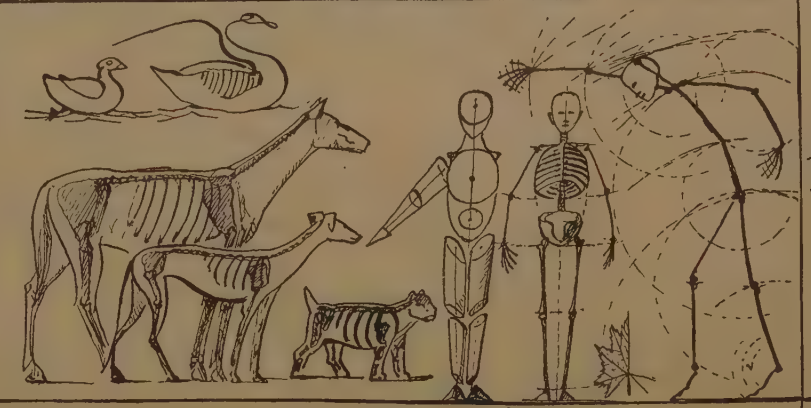
(2)





THE HUMAN SCALE (5)

(3)

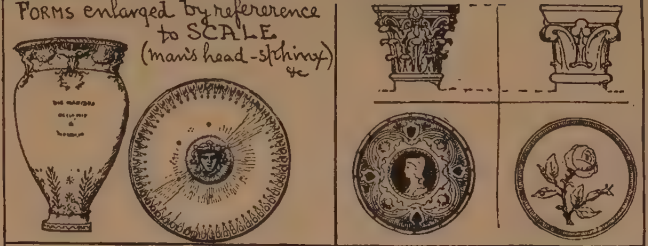


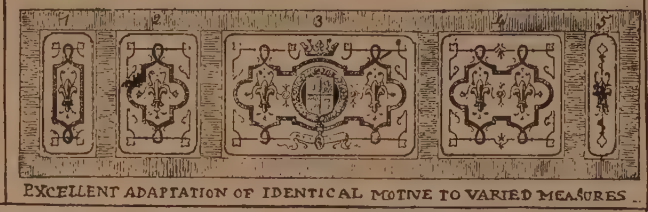
ORGANIC PROPORTION (6)

DIS-PROPORTION (7)

DIS-PROPORTION -to CARICATURE (8)

GOOD PROPORTIONS IN FORM & ORNAMENT





EXCELLENT ADAPTATION OF IDENTICAL MOTIVE TO VARIED MEASURES

ORNAMENT Enlarged Simplified or Enriched to SCALE of VISION (9)

PROPORTIONED & DISPROPORTIONED

ADMISSIBLE VARIETY

VARIETY IN PROPORTION (10)

to point out more clearly the *nobler Universal Standards of Beauty*—physical, intellectual and moral.

These standards have always that vital flexibility in organic things which, while constant in Spirit and Principle, admits of adaptation to time, place, service, material, etc., which gives variety to individuality—as between horse and greyhound; man and woman, etc. Just so in ethics, the great apostles point to "*the Stature of the fullness of Christ*" and "press toward" it, while ever retaining their *personality* as Paul, John, James, etc.

And we see (Fig. 5) that God has established the Human Stature as a physical Standard for *all* life about man on this planet—even as the secret of Beauty to man is his discerning and adapting the Divine Standards and Proportions in *all* phases of existence; and in harmonizing, balancing and wisely correlating, to time, place and purpose, the Divine Primaries and Principles the Creator has revealed.

In the closing Figs. 9 and 10 (after examples from Mayeux) can be seen rose, sphinx, human heads, hands, figures, etc., affording the eye a Standard for scaling form, ornament, etc. Variety in distances, magnitudes, materials or colors, admits Proportionate Variety in treatment.

LESSON XXXI.

ALTERNATION, ETC.

(See Chart XXXI.)

AS INDICATED in preceding lessons, the abrupt measures of space, time, etc., seen in the "beat" of musical baton or pulsation of the heart, or in tick of pendulum, may be so *metrically proportioned and graduated* as to produce the beautiful "Anthemion Crescendo" which we notice in the rise and fall of the bosom, the swell and ebb of tides, phases of the moon, etc.

By associating ideas of Progression with this Anthemion, we develop *graceful Undulation and Rhythmic Flow*—the mysterious principle of Divine Evolution in unfolding morning and evening, winter and summer, seed-time and harvest—where we behold the Integration, Disintegration and Re-integration of Life.

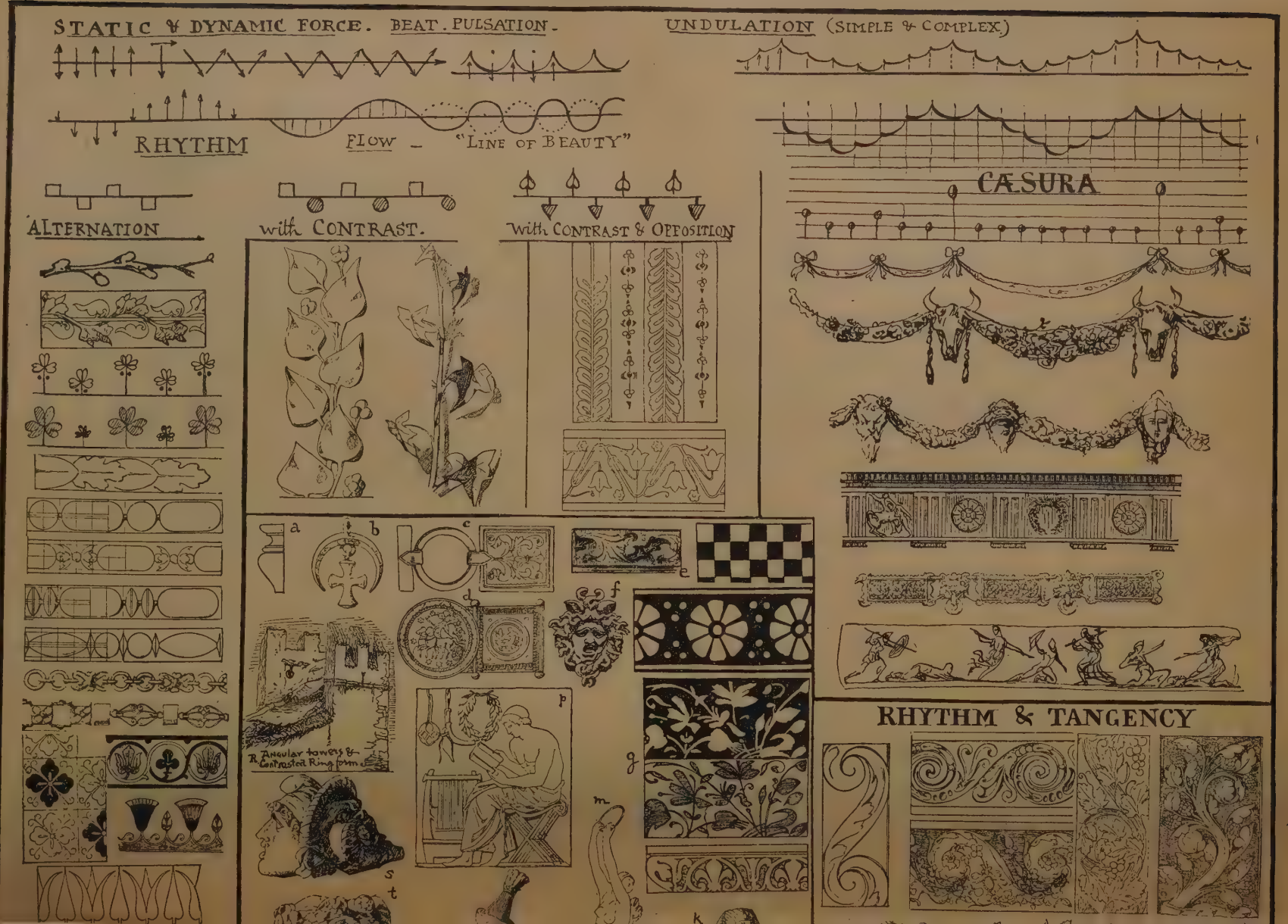
This dual relation in the Static and Dynamic conditions of creative Will and Force, is not only obvious in all Natural Beauty, but becomes a fundamental element in the Soul's appreciation.

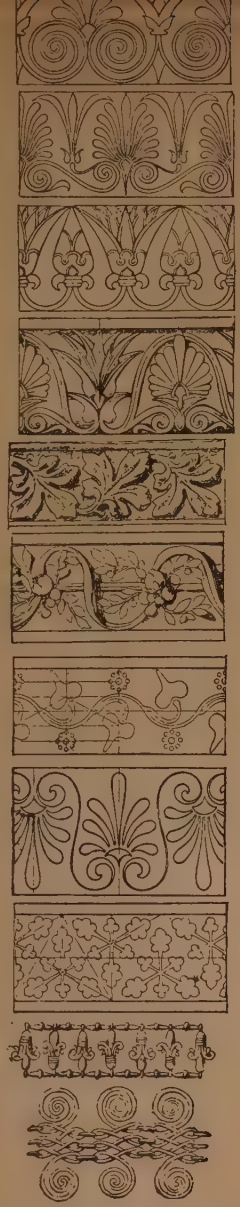
Hence are derived the esthetic Principles of

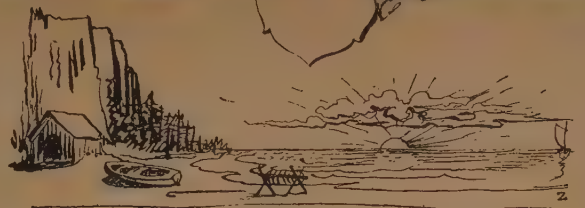
Alternation,
Counterchange,
Interchange,
Complement,
Contrast,
Opposition,
Rhythm,
Cæsura.

In the last few lessons the element of Unity was generally dominant. In this we mark Duality. And, as seen in Lesson V., while Duality awakens *new* interest, it *divides* the interest, the mind flying back and forth between the attractions until the *controlling* one and *the ratio* is felt. From this very variety of interest seems to be generated the charm of Alternation and the pleasure of Progressive Rhythmic Equilibrium. Such alternate play may manifest itself in various ways, related to position, size, form, color, character, composi-

CHART XXXI.—ALTERNATION







CONTRAST
ABRUPT
IN SIZE & CHARACTER

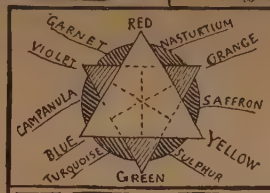
CONTRAST
GRADUAL
IN SIZES & CHARACTERS

CONTRASTS

a. In OUTLINES
b. " FORMS
c. " SPACES
d. " ORNAMENT
e. " COLOR or TONE
f.g. " LIGHTS & SHADES.
h. In SURFACES (bald and muched)
K.m. " Human versus Animal LIFE
P. " " FLESH " VEGETABLE TEXTURE
R. " STONE, METAL & " FORM & "
S. " BEAUTY versus UGLINESS
t. " COMEDY " TRAGEDY
z. " LANDSCAPE Elements.

COUNTER-CHANGE

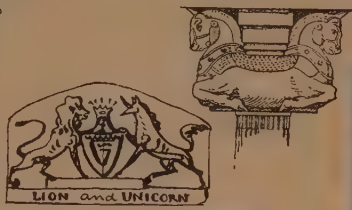
Pattern & Space
Creating the
SAME DESIGN - alternately

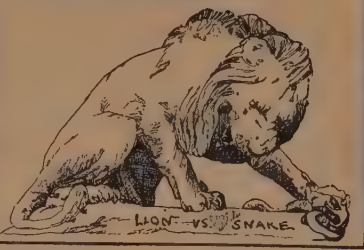


COMPLEMENT

Two Objects or Colors are Complementary when they CONTRAST yet COMPLETE each other, as parts of a WHOLE.
(as Man & Wife Day & Night
Red & Green Violet & Yellow)

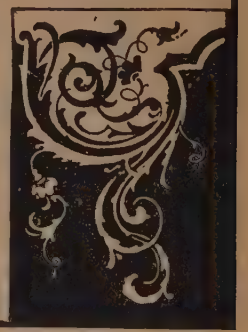
OPPOSITION





INTER-CHANGE

Pattern & Space playing over into each other & creating Different Design



tion, direction, etc., as seen in the first column of Chart XXXI. And in the same way we may find, in Art and Nature alike, *Contrasts* and (for extreme effects) *Oppositions* of all kinds. They may come from the simplest elements in outline (as in mouldings) or the complex and refined antitheses of color, pose, character, etc., as in "Othello and Desdemona"; "Virtue and Vice"; "Beauty choosing between Gold and Love"; pictures we give the elements of.

In Complement, the contrasted units must be parts of a *common Whole*, as man and woman, day and night, boat and sail, twig and leaf; or (as seen in the color chart of the last column) *any color and its directly opposite one* in the diagram. For that opposing color supplies all those elements, necessary to perfect white light, which its contrasted opposite color lacks. Hence each is helped.

In Counterchange and Interchange respectively, the contrasted pattern and space, or light and dark, play over and into each other, in such fashion as (in the first) to repeat the *same* forms, or (in the second) to develop *new* decorative forms.

It should be noted that light forms against a dark space seem *larger* than dark forms against a light space.

Still, forcing a thing to be seen strongly, is not necessarily to make it *admired greatly*. Hence fitness and artistic Situation must decide.

It is the highest and more usual aim of both Nature and Art to attain the noblest effects, not by violence but by Rhythmic and Harmonious Progression with natural Continuity—preferring even that separations occur gently and graciously (as seen in Tangency), or affording agreeable periods of rest and respiration before new advance (as in Cæsura).

LESSON XXXII.

HARMONY, ETC.

(See Chart XXXII.)

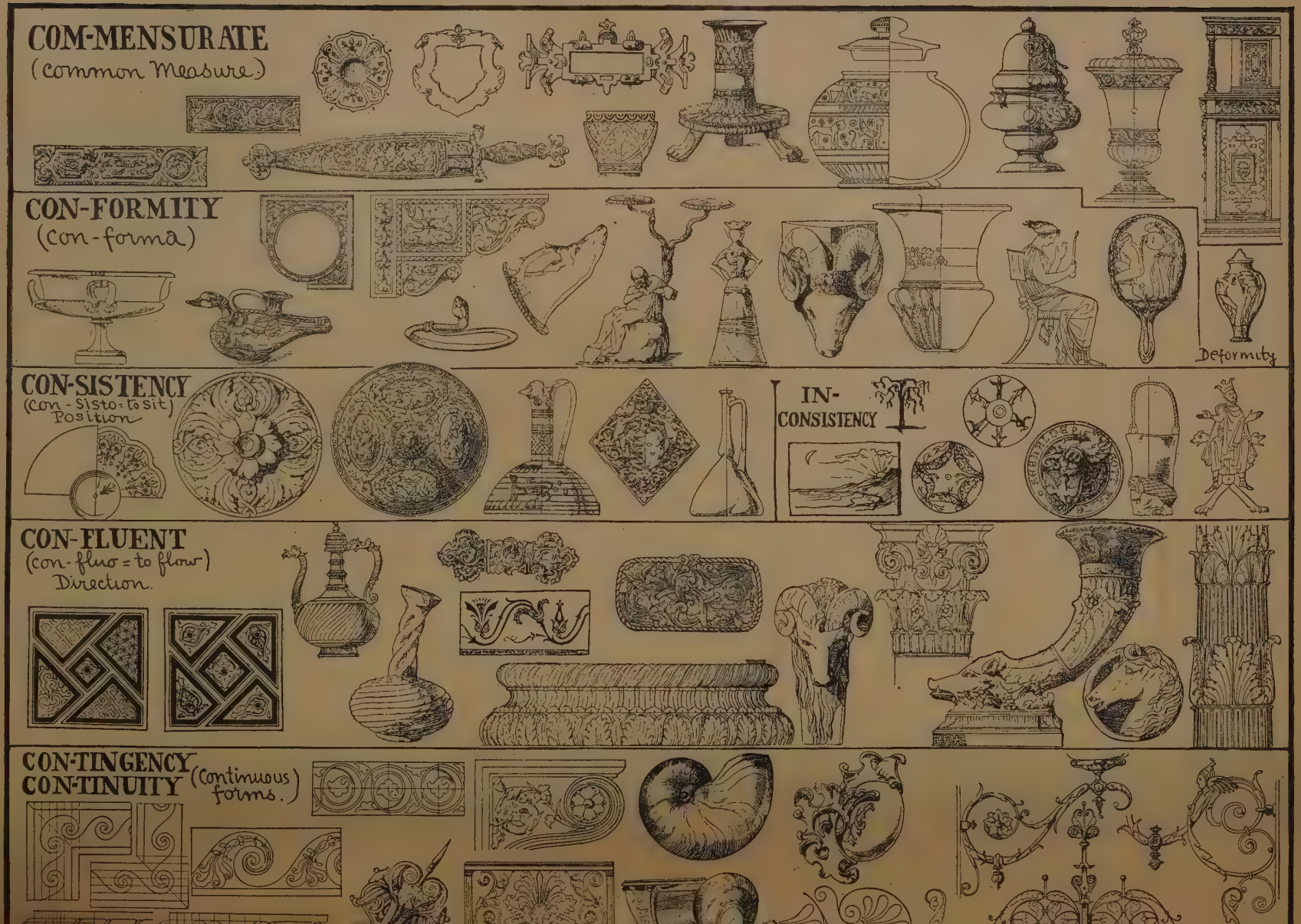
HARMONY is a Supreme Principle, arising alike from intuitive sympathy with the quality of materials; and from intellectual judgment as to their constructive relations; and from emotional sensitiveness as to their potential sentiment; which—under the sweep of a common controlling theme, or the inspiring fires of true genius—unifies, correlates and affiliates all parts or elements of an artistic composition into Organic Wholeness and Life.

It will, of course, manifest itself in *all* the subordinated components, whether they be considered in relation to Measures, Lines, Forms, Lights, Colors, Textures, Motions, Sentiments, Uses, or other.

And as this fact has given rise in language to many overlapping and hence confusing technical terms (loosely employed and tending to further differentiation), it would be well for teacher and student to hold them more closely to etymology, and to secure what fitting assistance may be already present in the familiar preposition "*con*," suggestive of the overruling principle of Affiliation involved.

Thus the present chart shows, under the term Com-mensurate, that element of Harmony which is secured by *corresponding measures* between structure and ornament. Equal outline has equal ornament; irregular outline has irregular ornament.

Then, the second appropriate term, Con-formity gives that sense of Harmony secured in corresponding *forms*. As shapes of spaces with their ornaments; handles with vases; horns of sacrificial ram with sacrificial block; serpentine brace-

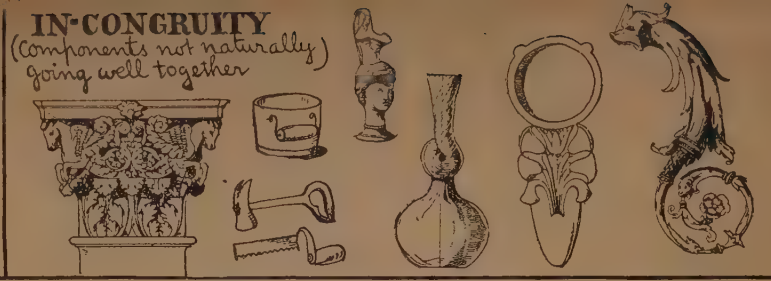

COM-MENSURATE
(common measure)
CON-FORMITY
(con-forma)
Deformity
CON-SISTENCY
(con-sisto=to sit)
Position
IN-
CONSISTENCY
CON-FLUENT
(con-fluo=to flow)
Direction
CON-TINGENCY
CON-TINUITY
(Continuous forms.)

CON-GRUITY

(con-gruo = grow) common growth.

IN-CONGRUITY

(components not naturally) going well together



CON-CORDANCE

(CON-cordia = Heart,) Common Sentiment

IN STYLES

CON-FUSION (ARTISTIC)

(Con-fusio = fusion — the fusing or blending of Colors, forms, patterns, threads, &c —

VARIETY IN UNITY

(VARIETY OF ORNAMENT IN UNITIES OF SIZE & OF STYLE.)

VARIETY IN UNITY & BALANCE

AMPLITUDE

MASSING

let with the arm encircled; or girl's form with chair, mirror, etc.

Under Con-sistency, and In-consistency, we see corresponding or non-corresponding ideas of *position* and feel the pleasure or displeasure, respectively, between such vases and plates as *stand well* and bear ornamental revolving; or, per contra, such as do *not* do this—as the artificial tree whose roots are reversed; festoons swinging *up;* figures and animals standing on their heads; jumbled medal; landscape with moon reversed; etc.

In Con-fluence we have the idea of common "*flow*," *i. e.*, harmonious general drift or corresponding currents between even different forms or those that do not touch. While in those Con-tingent and Con-tinuous we have the idea of constancy in general form with, possibly, great variety of *drifts*—there being either one continuous constructive extension, or many appearing to be one by the switches and joints of Tangency.

Con-gruity implies that the correlation is deeper still in common *growths*. As between roots and bulbs; flower and stem; the bird and its feathers; or such organic forms as can deftly be made to *seem to grow together* (mermaids, centaurs, etc.);—while those that do not are In-congruous.

Con-cordance gives us that deepest unity of all, due to common-*heartedness* or *sentiment* throughout the artistic elements involved. As where the vine tendril, leaf or cluster, decorate the wine cup; or the bubbles and frothy spirals decorate the beer mug; the rams' heads the altar; the cherubs' heads the baptismal font; and the gargoyle hand pours forth the rain, which the grotesque stone bird more appropriately shrieks or belches forth.

The same evidence of entire harmony of *spirit* is felt in the several examples of various Styles, adjacent.

We have considered, in this lesson, conditions of Multiplicity more than conditions of one or two artistic units or elements. (See Lesson V.)

This Variety often implies artistic wealth and power, and greatly enriches composition; and, like Amplitude, is forcibly employed by man and beast to enhance impressiveness—as where peacocks spread their tails; quarrelsome animals bristle up; warriors add plumes and bonnets to enhance height or fright; pompous people add trains to assume an effect.

It may attain great Complexity at times, as in geometric designs of Arabs and Indians, which yet retain latent unity of structure by great controlling lines; and it may even admit a certain Artistic Confusion, arising fitly from blending and changing of materials in the process of production or use. In painting, the retention of a Dominant color tone, or the Massing of lights, shades, groups of forms, etc., may also satisfy this grand principle of Harmony—as explained in Lesson XXIV.

CHART XXXIII–(*a*).—DEVICES FOR ARTISTIC UNITY

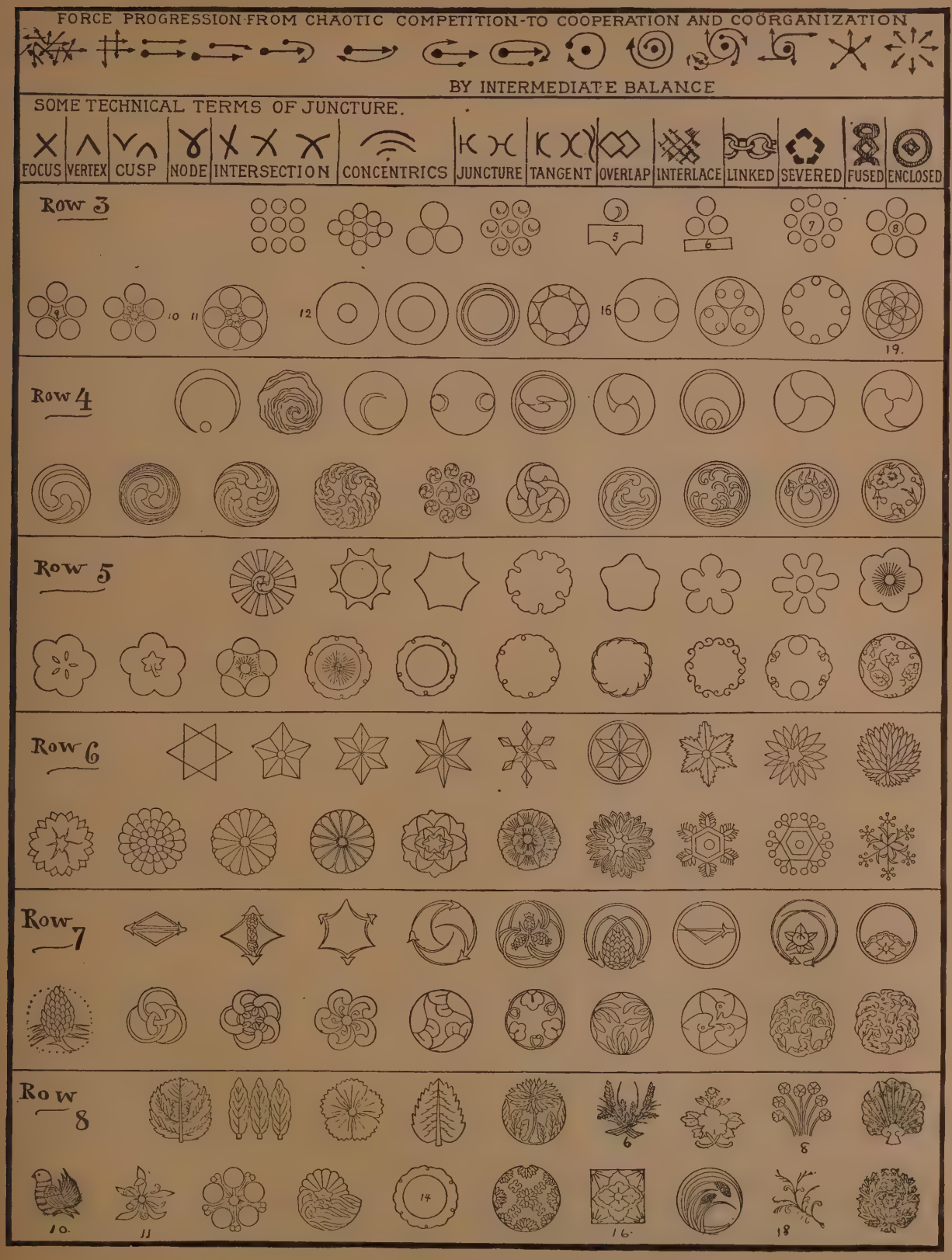
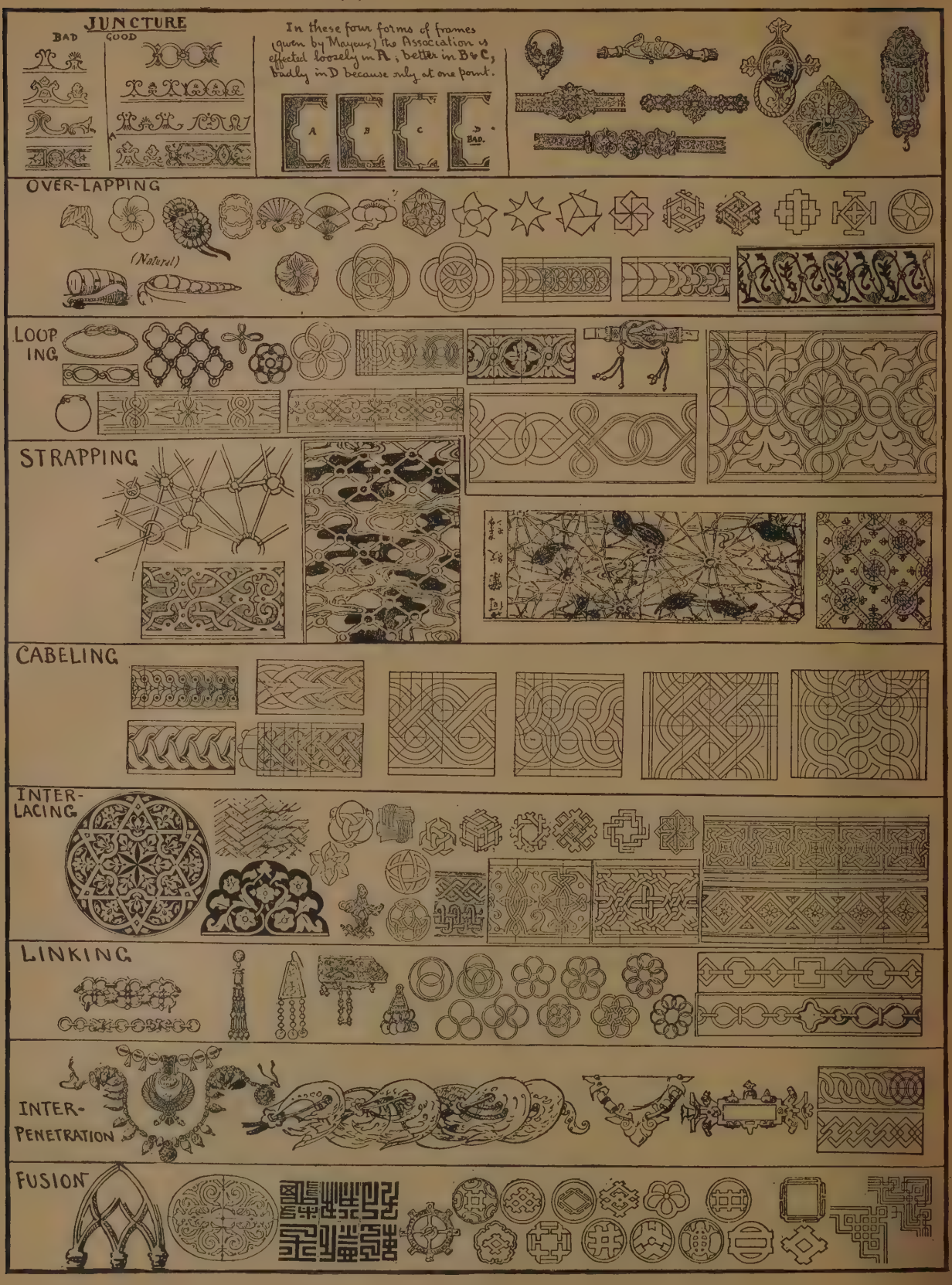


CHART XXXIII–(*b*).—DEVICES FOR ARTISTIC UNITY



LESSON XXXIII.

ORNAMENTAL DEVICES FOR ARTISTIC UNITY

(See Charts XXXIII–(*a*). and XXXIII–(*b*).)

WE SAW in the circular frontispiece and Lesson XVII. the grand Unfolding and Balancing of Force in Nature between a conservative *Control* for unity and a progressive *Freedom* for variety. Also, the inevitable esthetic effect of this on man's spirit, when seen in lines, forms, colors, etc.

Without clearly comprehending this law, man's esthetic conscience has felt it instinctively, from early days, and groped toward it in his Art, while inventing technical devices and terms to aid his progress.

We see (in row 3) the units of the first four patterns seem *loose* in spite of the latent square, lozenge, triangle and hexagon underlying the whole of each group. The fifth is helped by Balance; the sixth by Gravity below; the next two are helped by Gravity at the center. This Centrality or Concentricity is strengthened in the next two by more *attractive* Forms, and in the eleventh by Enclosure of all.

In the other patterns of this row and of rows 4, 5 and 6, we see that, while groups hold their gravity at the center, they allow the ornamental interest to expand out to the perimeter; to play around or within it; to break into clusters or seem to escape its control. In row 7 this tendency of interest toward Radiation so much gains in the elements that they seem to oppose, sever, chase each other; or to only temporarily return to their center; or even to dislocate it and to divert the eye to new centers, like fluttering birds breaking from their nests.

In row 8 the unifying principle of Concentricity is aided by those others we have elsewhere described, as

	Pattern No.
Lineal Repetition,	2
Concentric Repetition,	3
Reflection,	4
Symmetry,	5
Balance,	6
Dominance,	7
Gradation,	8
Anthemion,	9
Proportion,	10
Complement,	11
Alternation and Contrast,	12
Rhythm,	13
Cæsura,	14
Commensuration,	15
Conformity and Consistency,	16
Confluence and Tangency,	17
Continuity,	18
Concordant Harmony,	19

To these may be added the following Technical Expedients for Unity:

Juncture—In which adjacent lines or forms are optically bound by an ornamental bridge or tie.

Overlapping—Where forms overlap and so seem to the eye to unite in one.

Looping—Where they unite by loops ornamental or constructional.

Cabling—Where these loops grow to cables, as they are ornamentally termed.

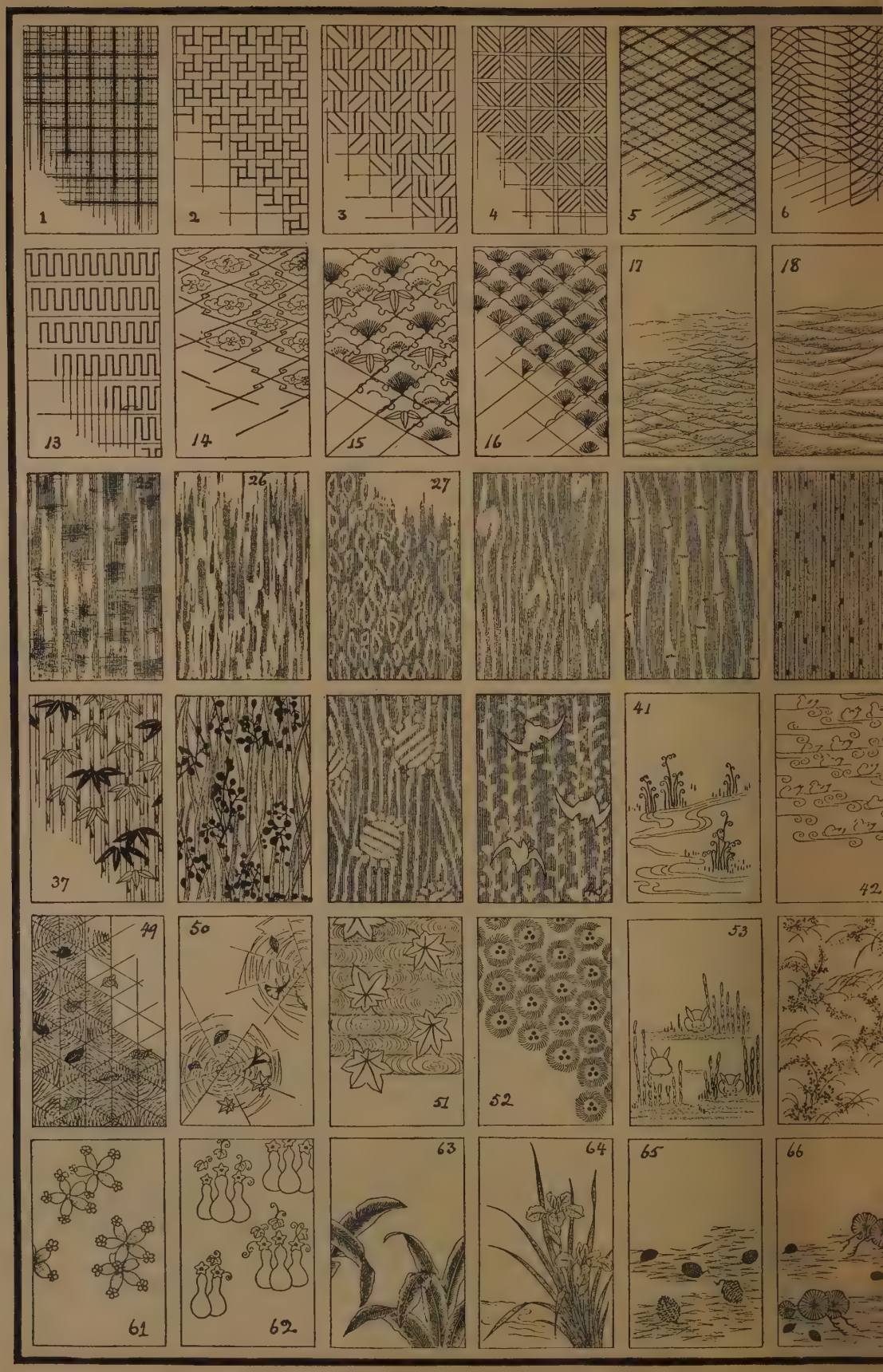
Webbing or Strapping—Where the connection has been suggested by spider-work or leather and iron joints in the construction.

Interlacing—Where the weaving grows more regular and compact.

Linking—Where metallic forging seems to bind the units closer.

Interpenetration—Where, by passing through each other, the forms seem to grow more incorporated into unity.

Fusion—Where the forms finally blend into each other so as to become entirely one.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LESSON XXXIV.

COMPOSITION

(See Chart XXXIV.)

WE HAVE noticed hitherto the Origins of Form; the Generation of Decorative Motives in early and simple instances; and some leading principles which control Combination-for-Beauty.

It will be interesting now to watch these fundamental truths and vital influences extending through Art and Nature.

Thus—recalling the elemental effects of Tendency or Suggested Motion (in Chart XVII.), and of agreeably contrasted, or balanced, or proportioned, or harmonized forms, in simpler concentric conditions for motive or pattern (Charts XV., XVI., XVIII., etc.), we can now note their effects expanded over the plane, regular surfaces of oblong panels; or experimented with in more diversified examples, later.

In this Chart XXXIV. our first illustration shows Motion strongly checked, to the vertical and horizontal, by squares—the larger lines vigorously controlling the smaller. In No. 2 the smaller lines grow freer; in No. 3 the smaller lines play obliquely; in No. 4 they throw the whole "set" of the design aslant. No. 5 expands it laterally; Nos. 6 and 7 wave it; No. 8 twists it in meanders. In No. 9 the units seem to tremble in temporary suspense; while in No. 10 they burst into steady stars; or, in No. 11, to ragged lightnings. No. 12 throws the eye sharply down; No. 13 runs it sidewise; No. 15 balances the directions and elements more than No. 14, which gives accent to the jagged obliques; or than No. 16, which leaps up in radiates.

In 17–22 we see that the quick artistic sense of Japan notes cleverly these Esthetic Laws in the natural play of wave, line and form—as the wind stirs from zephyr to tornado, or in Nos. 23 and 24, tosses the tendrils, leaves, and love-notes tied to blossoms.

In the third horizontal row, we see these significant Contrasts and Correlations dexterously seized, from the admirable suggestions of Nature, in the grains of wood and bark of bamboo, etc.; or (33–40) the growths of grasses, twigs and ferns; or the pleasant metric interruption of their tendencies—by leaves, berries and passing objects.

In Nos. 41–51, graceful drifts of running stream, beating rain, curling clouds or growing grain are cleverly *checked* and *crossed* by other trends and forms, of osiers, birds, tortoises, fishes, or leaves that swim, float, fly or are caught in eddies and webs.

This timely change of interest, or arrest of attention from the rush of motion and complexity of form, we have before explained under Cæsura, etc. (Lesson XXXI.), and here we see it delicately implied by Nature in the emphasized points of her seeds, joints, budstarts, etc. (Nos. 52–56.)

Finally, in the last of this chart, is noted the delightful decorative effect of Enclosing within the simple parallelogram of a screen (or, as it were, passing car-window) the gracious combinations of Nature's seeming *accidents*—in snowflakes, shells, mollusks, insects, blossoms, fruit, etc. (Nos. 57–67); or in the partial combinations of Nature's Art with Man's (in Nos. 68–69); or those wholly by Man (in Nos. 70–72).

CHART XXXV-(*a*).—COMPOSITION

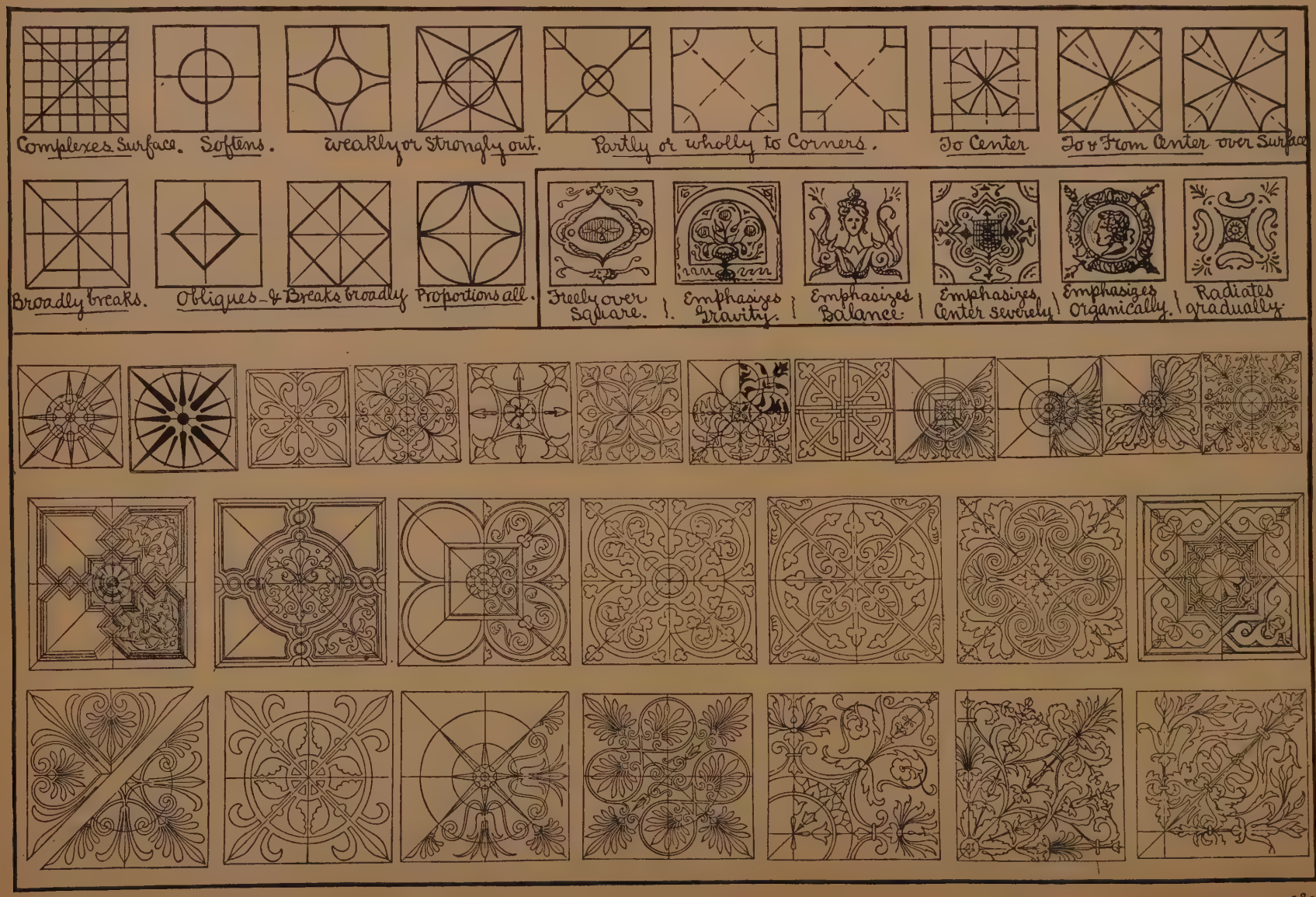
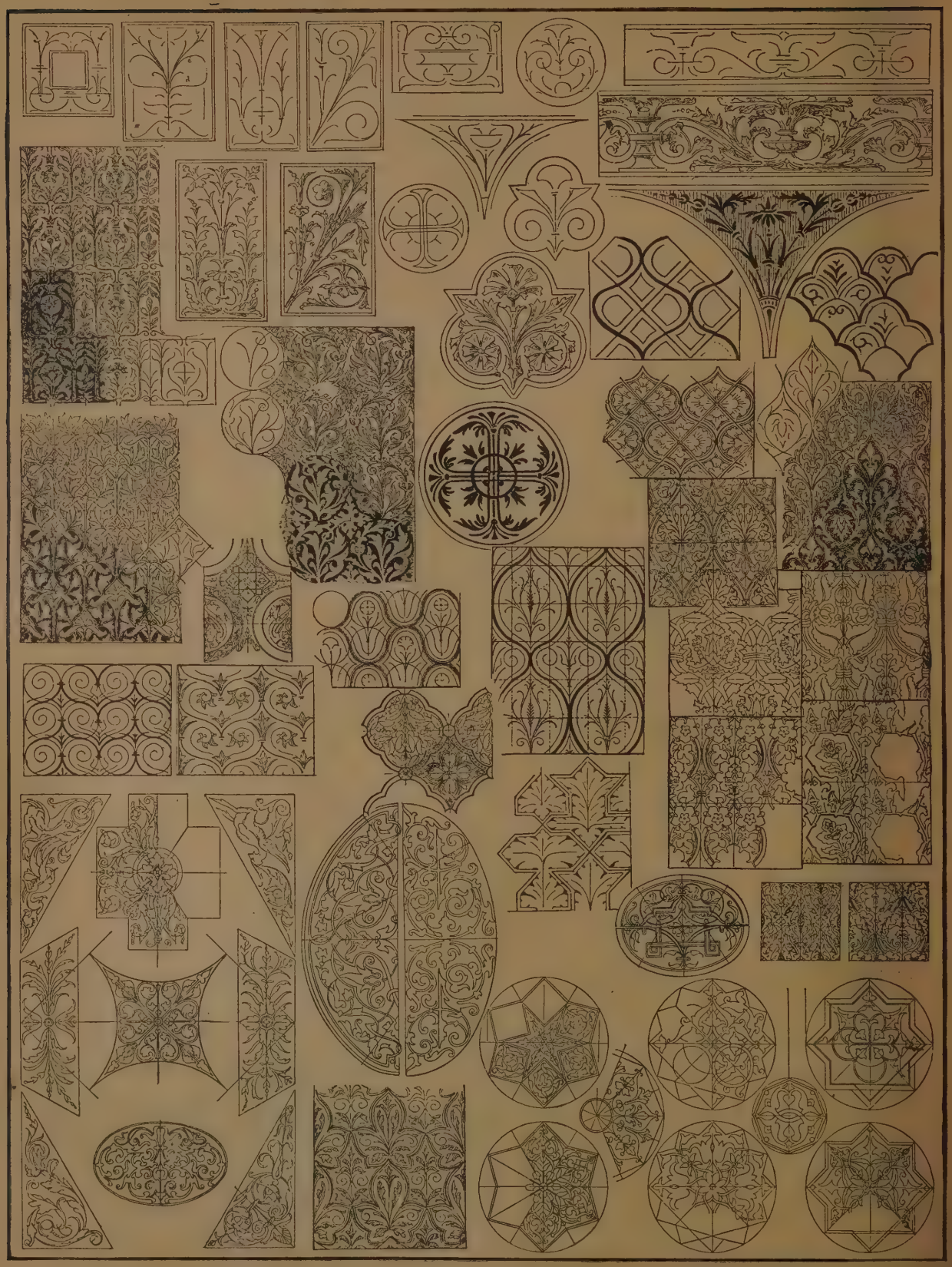


CHART XXXV-(*b*).—COMPOSITION



LESSON XXXV.

COMPOSITION—(*Continued*)

(Charts XXXV–(*a*). and XXXV–(*b*).)

WE HAVE noticed the agreeable distribution of diversified forms or movements across the simple plane of a Japanese screen, let us now notice the effect of more studied and formal arrangements from other sources—ancient or modern—first with more varied or enriched Surfaces, then with more varied or enriched Solids.

Thus, taking first a Square Plane—in Chart XXXV–(*a*).—a simple abstract treatment of design first complexes the surface; then softens it; then plays the eye out from the center; then to its corners; then to the center, or to and from the center, over the surface. In the second row we see the Square broadly broken so that the eye remains steady; next, it is obliqued and *also* broadly broken; then all influences (of Right, Round or Radiate quality) become well *proportioned.*

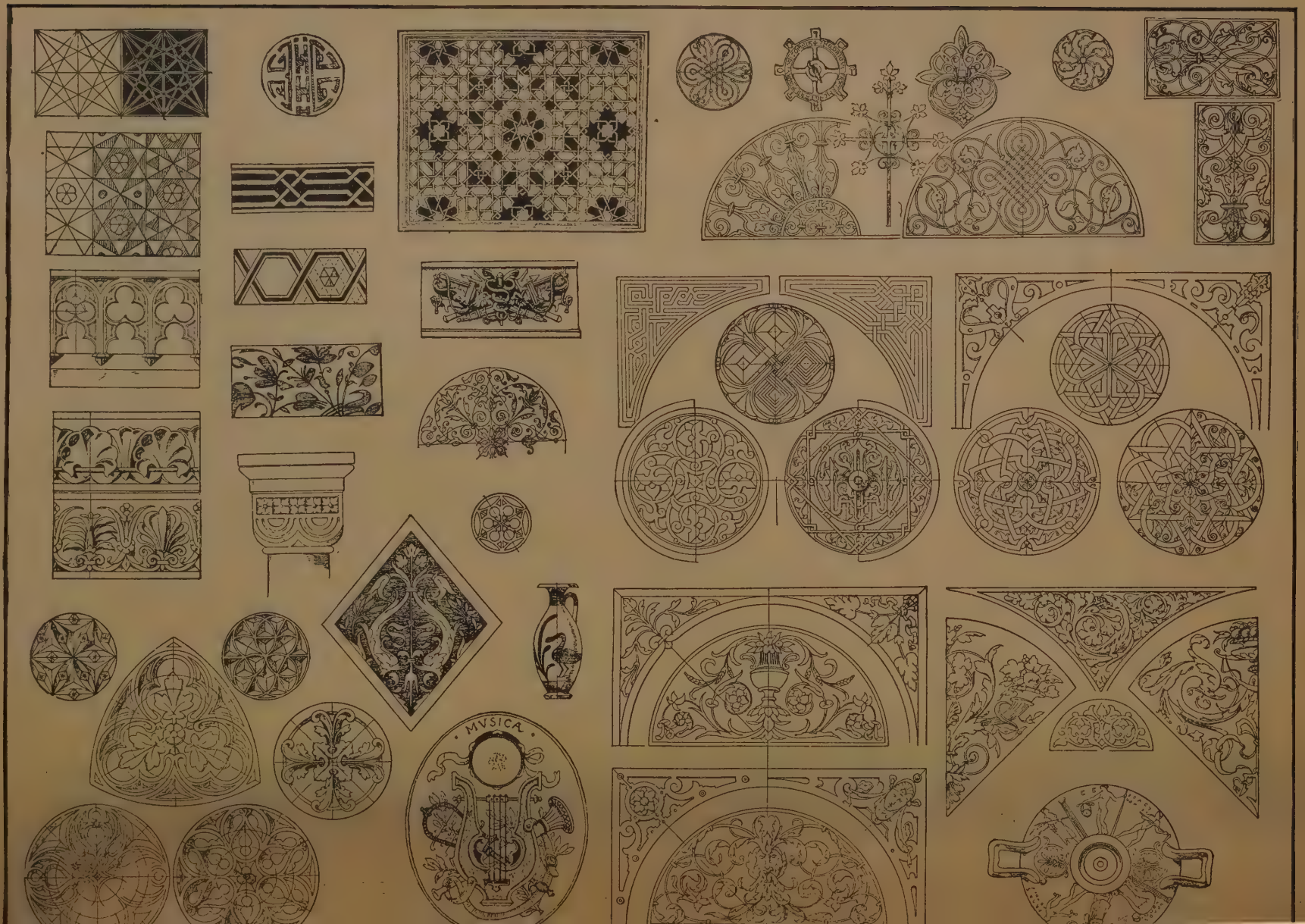
Enriching the ornament in the next six patterns, we may still play the influence freely over the Square, or emphasize Gravity, Balance, Centrality, or Radiation, etc., and use either mechanical or organic units.

In the third row we see that the abstract skeleton of the pattern may establish a Proportion between Right, Round and Radiate elements, which may be displaced afterwards by relatively stronger Emphasis—toward light, color, or rich elaboration. Thus, in the second example, the strong darkening of the Radiates makes them entirely dominate the weaker dark of the Circle, and still weaker Square. Example 3 shows the Square strengthened by slightly more elaboration, and (in examples 4, 5 and 6) restoring its influence at the center when lost at the outer margin. The remaining examples of the third row show the Circle growing more or less interesting. Fourth row shows the proportion of interest more evenly retained throughout the surface enrichment. Fifth row shows, in its first four examples, the Subordinate Radiates enforcing the main Radiation; softening, opposing, or giving it an oblique deflection (example 4), which may be aided by other ornamental mazes—in the motion or the enrichment. (Examples 5, 6 and 7.)

The following page gives us a variety of other forms than the Square, for an external border of surface to be ornamented; and various skeletons of suggested movements or forms, by which the eye may be made to play agreeably across such surfaces.

Every student or teacher should multiply such examples from the exhaustless collections of Nature and History—these few accompanying ones being selected, or readapted by new arrangement, to illustrate important and all-pervading Principles and Laws, here scientifically considered and collated, without which the study and practice of Art remains a servile imitation, a soulless externalism or the painful groping of instinct and bewildered experiment.

CHART XXXVI.—COMPOSITION



LESSON XXXVI.

COMPOSITION—(*Concluded*)

(See Chart XXXVI.)

IF NOW the art units employed in the composition are more and more liberated, from the conditions of embellished Surfaces to that of agreeably arranged Solids, still the secret of the agreeableness and charm in the arrangements will be seen to depend essentially on the *same* Elements and Principles as before explained.

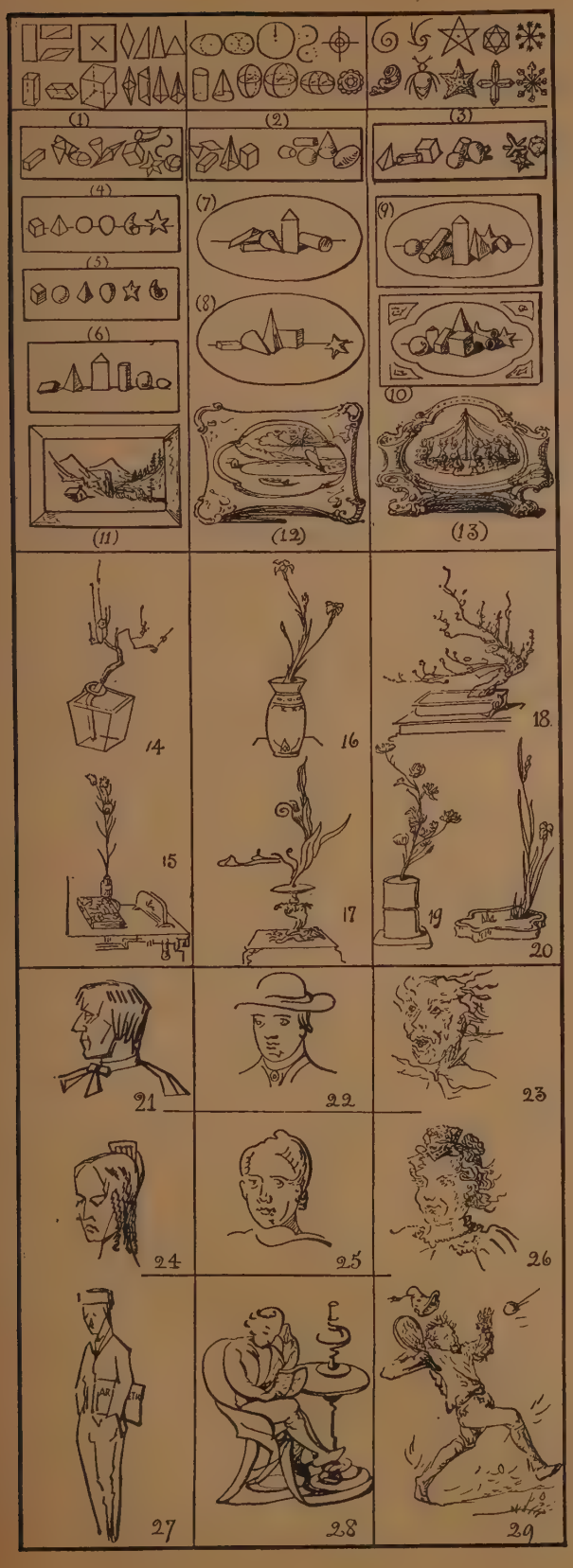
This will be seen either in the drift of the lines; the character of the forms; or in the numeric, quantitative and distributive values involved—or in all combined.

The energies of Right lines, angles, or forms will give to the Composition esthetic *Vigor;* Round lines and forms will give *Softness;* Radiates will give *Brilliancy, Variety, Play.*

Added Light and Shade, or the contrasts and harmonies of Colors and Textures, may also be made to modify greatly the first structural effect or the early implications of the Composition; just as the combining and twining of a woman's locks may modify and augment the beauty of her head's original shape, and her raiment may check or enhance the charms of her body.

The accompanying examples are sufficient to illustrate the above truths, and the transition is readily followed on—from where the design is *liberated from surface* (by strengthened contrasts in the light, or colors; or by textures; or by such piercings and modifications of surface as we get in stenciling, basketry, marquetry, grilling, etc.; or by the lower and higher Reliefs of needlework, jewelry, tiling, carving, moulding, etc.) to where Solid effect is deliberately sought over that of Surface, as in medallion figuring, medallion clusters, and some high paneling.

From these the step is easy to *entirely liberated* figures, in industry, architecture, furnishings, etc.; with such composition of their forms, outlines, colors, shades, decorative markings, as give *special* charm and style to public or private taste; and we will enter immediately into the consideration of them in the Apparent Reliefs of Portraiture, Landscape and general pictorial renderings of animate or inanimate things.



LESSON XXXVII.

EXPRESSION.

OUR STUDY of preceding lessons should now not only quicken our interest in all created things and our perception of Art as a Universal and Divine Language of Expression, but intensify our discrimination between such creations as are designed to express and subserve mechanical utilities; or such as are designed to express and subserve local character and personal experience; or such as are designed to express and subserve Universal Principles and Inspirations of Beauty; or the varying degrees by which these are commingled (or inaptly omitted).

Thus the student or teacher may take, first, a few simple and available Units of Form from those indicated (in Lessons XII., XIV., etc.) and which could (by wire, wood, paper, glass or plaster) easily present *lineal*, *plane* or *solid* examples, and so experiment with their optical effects upon each other and in composition—along the lines hitherto explained.

From these it will be easy and logical to advance, with sympathy and comprehension, through the Art forms and compositions that express the richer spirit of Nature and History.

In the examples now considered in these three appropriate columns, Right, Round, or Radiate influences are allowed to play together in various interinfluence and association, and quickly give Expression to the elements involved, or to their pictorial settings.

In the first three plaques, the elements are not composed, but only promiscuously Varied in Fig. 1, classified in Opposition in 2, and classified in Progression in 3. In 4, 5 and 6, while the pictorial plane remains ungraciously severe, the orderly interests of Magnitudes and Distances (see Lesson VI.) begin to enter, with Variety, Alternation, and Anthemion. 7 and 8 soften environing form, and give us cases of Dominance and Free Balance respectively, in which latter

case (8) the star-form adds brilliancy as well as complementary balance to the other elements. 9 varies the setting still more, but gives a Formal Balance within, while 10 disposes the forms and shadows more acceptably and in still more *varied* frame.

In 11 the Severity of the mountain theme is echoed in the framing.
In 12 the Graciousness of the lake-shore theme is echoed in the framing.
In 13 the Playfulness of the May-pole theme is echoed in the framing.

In the next series of diagrams (14–20) we now readily discover the secret of the famous Japanese interest in Flower Arrangement, and the quick sympathy with which they feel Nature's poetic intentions. They so artistically eliminate disturbing accidents, or fortify (by accenting) the lines and forms associated with the flower, as to compose pleasantly and *expressively* with it, while recognizing its special spirit as a divine Idea. 14 and 15 are most angular; 16 and 17 are more graceful; 18 and 20 are most radiate or free.

Finally we are enabled to see the same esthetic factors at work in all Animal Life, as in earlier vegetable, mineral, chemical or purely abstract geometrical influences, and should review Nature's Studio from this point of view.

Especially we note their presence and influence in the expression and significance of the human being's lines and forms, whether organic to his race and structure; or temporarily impressed upon his composition by the varying moods of his manifested inner spirit; or by the characteristic actions of his body, drapery and surroundings.

Thus, (in examples 21–29) we see the Right, Round and Radiate influences (in their several appropriate columns) playing together in various expressive proportions, which *instantly decides the body's expression*, and either accents or modifies preceding significances of age, sex or personal character—already involved in birth and habits. The true artist will watch for these latter, and seize them early, as first in importance to good portraiture; and will then so modify the attitude, drapery, light and accessories, as to help out the original conception of Character and Sentiment in his model. He will either eliminate the irrelevant or concentrate and emphasize the valuable and vital. *In this consists the supreme skill of the best artists.* And what is first commenced as a crude instinct and developed as an intellectual comprehension, becomes at last perfected as a broad and certain artistic Faculty. It is then that we analyze our landscape for its most subtle or comprehensive suggestions; and study our sitter for his deepest and most organic self, his largest simplifications, his most characteristic self-expression; and bend all auxiliaries or accessories to aid this main Idea. But an artist must be developed and sensitive himself in order to read the sensitiveness of others; and naturally he will grasp most quickly the situations he can best comprehend, the sentiments and elements he has most fully mastered. This explains the majesty of Michael Angelo, the rustic sympathy of Millet, the tenderness of Corot, and the Venetian splendor of Titian's passionate color.

From the *Personality* of each artist in temperament, intellect, imagination, etc., there will inevitably appear an artistic Character for each theme, alike in choice, setting, color, lighting and general treatment. On deeply studying the great art field and museums,

Angelico seems most marked for Devoutness and Spirituality;

Michael Angelo for energy and structural Force;

Raphael for refined elegance and majestic Balance;

Correggio for gentle grace and sparkling Light;

Titian for deep and passionate harmonies of Color;

Da Vinci for serene taste and perception of Personality;

Rembrandt for technical excellence, color Substance and profound Shadow;

Rubens for decorative brilliancy, dash, Dexterity;

Velasquez for subtle Realism;

Millet for sensitive and pathetic Humanity.

Rousseau for the effect of pregnant and pensive wildwood.

LESSON XXXVIII.

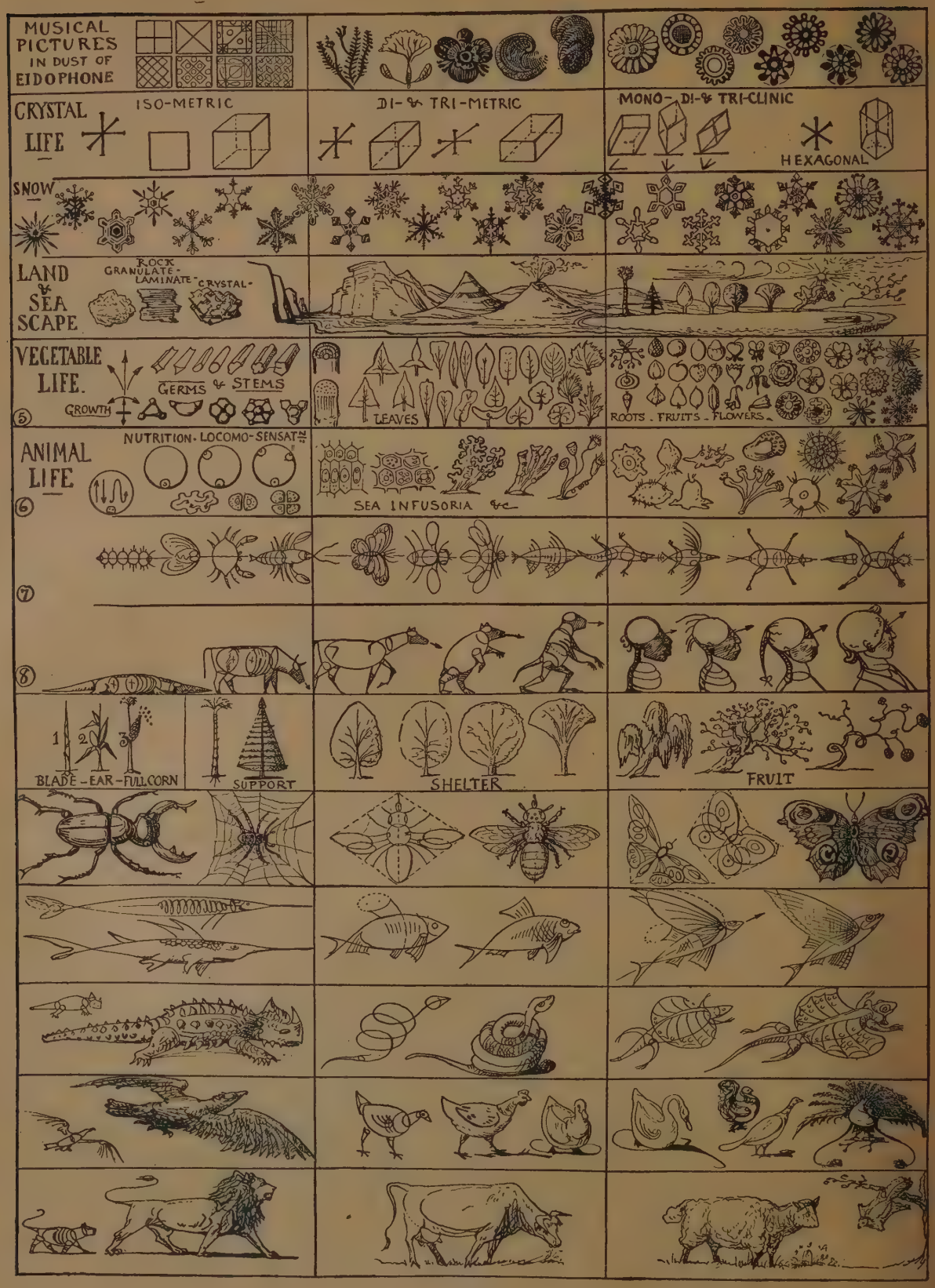
EXPRESSION IN NATURE

(See Charts XXXVIII-(*a*). and XXXVIII-(*b*).)

IN LOOKING over the great workshop of Creation—before and apart from man—a penetrating artist will detect everywhere the unmistakable elements of Style throughout the of Art of God, giving full evidence that he primordially established KEYS of artistic composition or construction for a Formal Language of Expression, which should supply meaning and character to man's Art just as inevitably as to His own. He does not recklessly nor arbitrarily create, by inconsequential fiat, but moves out upon majestic plans with the same *rational Order and Sequence* that he expects of man; and because the logic of creation contains *Causes and Consequences* wholly beneficent and reasonable in the ultimate issues of divine progress. He gives to man the same key to composition and construction, that there may grow to be the *same enduring quality and worth* in man's work. He bestows on all His creatures, in higher and higher measure (as required by their special life and necessities) a lamp of Reason which they are ever permitted to light at the same central Sun of His Intelligence. The ant or squirrel who plans and stores for rainy and wintry days, is using a fragment of the same Celestial Reason which lights the prudent farmer at his harvest gathering, or the wise Joseph in charge of an Egyptian empire,—storing from the "full years" for the "days of famine." The beaver building a dam calculates the pressure of the downward current of the stream that strains his gnawed-off logs by the same just insight into law as does the human engineer who follows him. It is a question of degree and not of kind. And so, in the design, construction and composition of their Formal Arts, we find both the lower and the higher creatures following the esthetic logic of their Creator—adjusting the same elements by the same inevitable principles. The cock, boar or lion bristling his plumes or hair to enhance the esthetic terror of his head and gleaming eyes by a burst of radiate lines and heightened colors, is using identical laws of Art Expression as the Indian warchief with his headgear, or man with his bayonets and banners. The rigorous and strenuous lines are sought by the wolf and bull with as straight an *instinct* of their esthetic force to imply resistance and defiance, as curved lines are caressingly played with by the kitten who seeks to convey the opposite impression of her kindly disposition and style. Hers is an identical instinct toward artistic law to that of the graceful belle coyly coquetting with her laces and fans, or the playful child dancing about the May-pole.

The right-lined rocks and down-right cliffs that Deity employs to foil the curling waves or dancing seafoam, added to his compositions for Enduring Beauty, had given alike to nature and man the simple yet stupendous Keys to every combination and constructive style that followed. Hence every age pours forth through rigorous crystal, winding river, softly-rounding cloud and leaf, or brightly-dancing flower or bird, distinct Art Composition—poetic and pictorial—incarnate with Divine Style. From them attentive man absorbs the alphabet and grammar of his own best styles; and though broken or disproportioned by the ignorance and gross blindness of unthinking society, *the Genius of Art struggles onward with the precious gift of Beauty, to summon the race back to Nobility and Perpetuity of Production.* About him on all sides man beholds the illumined messages and speaking poetry of God, the eternal Principles and Processes by which he educates and delights his offspring; and out of the majesty, deftness and fascination of celestial Art, man takes inspiration and suggestion for his own terrestrial art.

CHART XXXVIII-(*a*).—EXPRESSION IN NATURE



TWO poems by William Blake, the old English artist, well exemplify Nature's contrasts in Style:

"THE LAMB

"Little lamb, who made thee?
Dost thou know who made thee?
Gave thee life and bade thee feed
By the stream and o'er the mead;
Gave thee clothing of delight,
Softest clothing, wooly, bright;
Gave thee such a tender voice,
Making all the vales rejoice?
Little lamb, who made thee?
Dost thou know who made thee?

Little lamb, I'll tell thee;
Little lamb, I'll tell thee;
He is called by thy name,
For He calls himself a lamb;
He is meek, and He is mild,
He became a little child.
I a child, and thou a lamb,
We are called by His name.
Little lamb, God bless thee!
Little lamb, God bless thee!"

"THE TIGER

"Tiger, tiger, burning bright
In the forest of the night,
What immortal hand or eye
Framed thy fearful symmetry?

In what distant deeps or skies
Burned that fire within thine eyes?
On what wings dared he aspire?
What the hand dared seize the fire?

And what shoulder, and what art
Could twist the sinews of thy heart?
When thy heart began to beat,
What dread hand formed thy dread feet?

What the hammer, what the chain,
Knit thy strength and forged thy brain?
What the anvil? What dread grasp
Dared thy deadly terrors clasp?

When the stars threw down their spears,
And watered heaven with their tears,
Did He smile His work to see?
Did He who made the lamb make thee?"

In the Circle Chart, on page 162, I tried to suggest pictorially, as in some cosmic kinetoscope, such a "Bird's-eye view" of Evolving Life, unrolled through Arts of Form, as human mind can to-day grasp in *orderly Sequence*. And in the early relations of mathematics, geometry and sound, we saw the Alphabet-of-Beauty beginning to reveal first phases of significance and fascination.

In the present chart (XXXVIII–(*a*).) we reconsider some of these important manifestations, compactly placed in juxtaposition and sequence, and under the same "Three Prime Columns"—that we may catch more clearly Nature's wonderful consistency of Style involved in Forms, and the marvelous constancy of Primal Principles discovered.

The Eidophone progression is self-evident at a glance, for it falls quickly and easily into the Right, Round and Radiate categories—geometrically considered above.

The Crystal life also, though rigorous throughout, gives the same mathematical categories of "Single, Double and Treble" standards in their axis of inclination.

The snow crystals, which mainly prefer hexagonal (that is, doubly-treble) formations, still manifest "right" and "round" underwebs beneath their brilliantly "radiate" overlays.

The Seascapes we have spoken of.

The Landscape obeys the same great laws; it disintegrates its rugged rock-lines into a plastic soil that swirls around into cones, mounds and undulating valleys, then mounts up again into radiate vegetation.

The Trees themselves show progressive stages of Form-advance, from rectilineal, structural pines and cone-shaped cedars, to ovoid and ellipsoidal shade trees, on to more irregularly radiate fruit-bearers.

Stems, Leaves and Flowers are similarly arranged as they extend over the same three characteristic columns—in the series numbered five.

In the series marked six we see the rhythmic beat of life, begun in protoplasmic Cell, passing through three similar stages of single, double and treble organization, for "Nutrition, Locomotion and Sensation"; till by fission and multiplication they expand and disseminate into radiation.

In series seventh we see the whole system of Cephalization rising, from the simply lineal and geometric worm or annulata, and from hard-shelled mollusk or crustacea, through the higher formations of Insect, Fish and Reptile, to those plastic and complex Mammalia and Human forms which culminate and radiate all faculties into commanding style and character and personality. The straight line of a common unity is clearly seen preserved in the central vertebral line of their ascending systems; while Symmetry plays more and more freely along the two sides, through *reflected* limbs of locomotion, till we reach the flexible and complex faculties in Man.

In series eight we see the prostrate attitude of Brain, from prone and coarser horizontal life, ascend gradually to an upright and perpendicular attitude for progression and observation; by which it better contemplates itself, its fellows and the upper heavens to which it is rising—rather than looks downward to the lower life of the belly.

So far as I can conceive, through this light thus cast upon Evolution by the implications of Morphology and Form-Reasoning, this cerebral advance of "Brain over belly and bone" must have reached a culminating point between man and the ape where the tendency of brain mass to expand over bone mass (in the ovoid head) *passed a line of ascendency, and secured a victory over the earlier tendency downward. Then probably man first knew himself as "Man," and became a self-conscious (or rather, self-comprehending) Mind.*

This was, in all probability, but the first step of his magnificent intellectual march through gradually enlightened thought, and cultivated moral conscience, till he attained the guiding capacities and inspiration of our noblest men to-day. The highest advances and impulsions for the race must ever come from those who have most faithfully and reverently *sought to arise*—by clarity and independence of Thought, and by charity and purity of Purpose—along Life's Sublime Ascent. They never come from those who, by animal voracity and greed for material accumulation, *stifle progressive spirituality* under the weight of cruelty, convention, or complacent externalism. Such spurious "wealth" (so called) can never accompany the Spirit to its heavenward goal. But rather the heroic seeker and seer of Truth, or the brave martyr for moral Right and Human Amelioration, seizes the sacred hour of opportunity to ascend the scale of spiritual being, and to be borne further upward by the Wings-of-Passing-Deity. For thus alone he escapes the *inward* retrogression, or the blind misguidance of the vain, the worldly and the wicked!

The last five series of this Chart XXXVIII–(*a*)., bring out a little clearer the three stages of Style Expression that appears below man. They rise from Tension and egotistic Competition in the first column; to more curvilineal Coöperation or flexibility in the second; up to radiate Coörganization, fruition, delicacy, decorativeness, lightness and tenderness of character, in the third and highest.

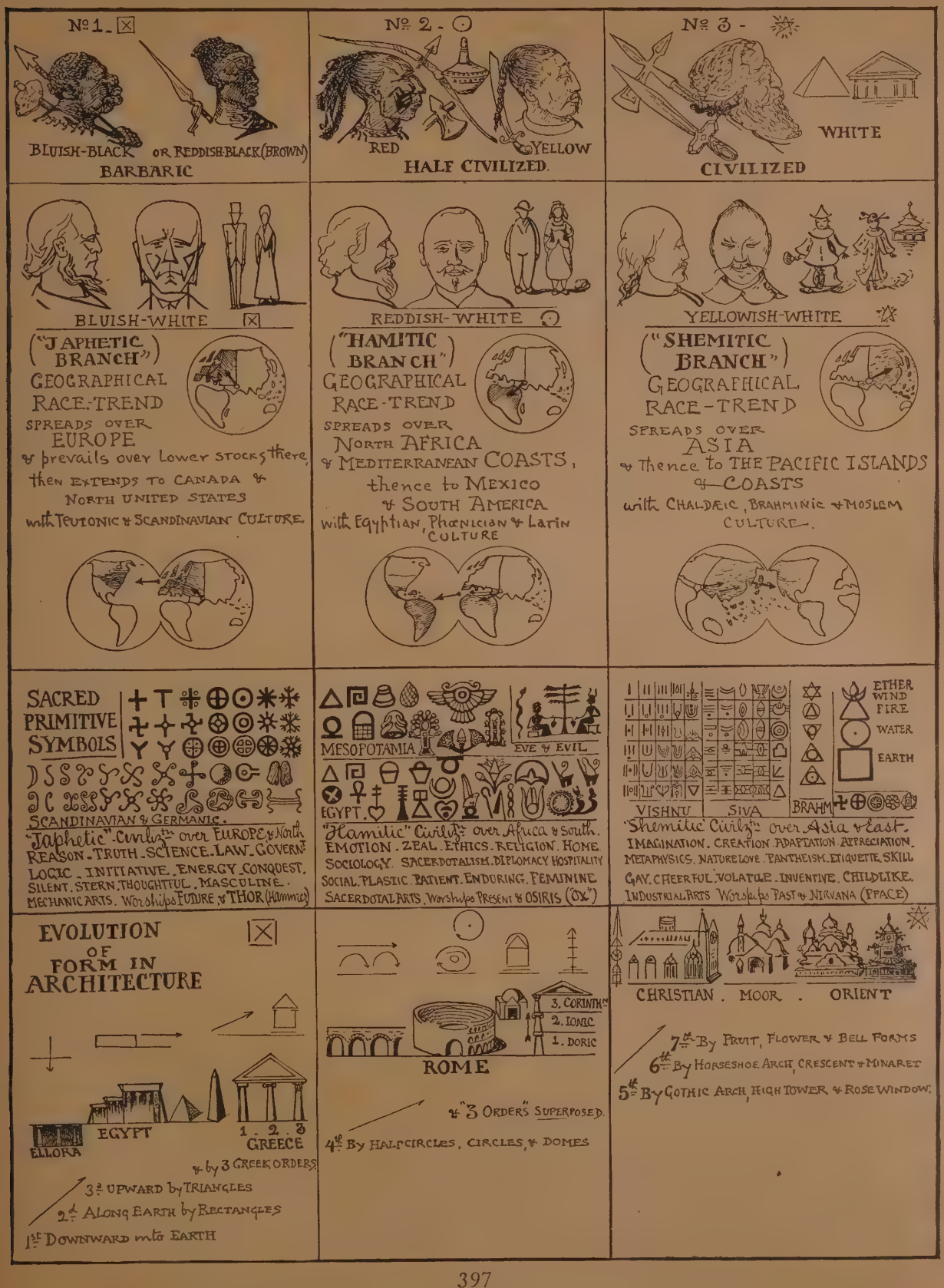
WE MAY see these same characteristics of evolving Form and triple Style extend over *three* Stages of Barbaric, Half-Civilized and Civilized man, and be reflected directly in his arms and arts. (See Chart XXXVIII–(*b*).) Even among those later and higher race migrations, which whiter and more civilized man pursued under the pressure of a higher ambition and ideality, we can still remark distinct tendencies to broadly classify under Three Main Types of social disposition and temperament, based on similar prime relations in force and form.

They reflect these dispositions in physical construction, costume and appropriate climatic extension.

The more rigorous and scientific Northerner, with more bony frame and angular exterior, and with strong prejudice for mechanical forms and material wealth, inhabits congenially a colder climate, and seeks expression in mechanical distributions of force and what he deems more "practical" evidences of power.

But the more social and plastic Southerner, with a rich emotional nature and most wonderful religious history, through the missions and sym-

CHART XXXVIII-(*b*).—EXPRESSION IN RACE AND ARCHITECTURE



pathies of the heart and the equally valuable but less mercenary life of the affections, rejoices in a warmer climatic, richer colored, and more socially human existence and influence.

Where the Northerner more distinctly seeks reason, truth, science, logic, law and government (and being more silent, stern and thoughtful, is driven toward great mechanical initiatives and even world-extensions of trade), the Southerner, with more emotional zeal for ethics, religion, sacerdotalism, sociology, hospitality and the home, studies to extend his power through faculties that are more diplomatic, and arts that are more plastic and human.

While, quite as distinct from these two in character, forms and geographical distribution, there is the great Eastern or Asiatic culture through a wonderful and universal pantheistic nature-love; in marvelous metaphysical insight and appreciation, and infinitely creative imagination linked to subtle adaptive skill; full of volatile, sunny, childlike arts and courteous etiquettes—as complex and infinite as its dexterities and applications of Beauty.

It is interesting to notice in these different geographical sections how man has tried to preserve, in his primitive sacred symbols, forms which would esthetically establish some of his ideals, and imply those to which he would subsequently attain.

In the one sole section of Architectural Evolution, at the bottom of Chart XXXVIII–(*b*)., it is highly suggestive and interesting to notice the *Emphasis* progressively given by constructional form—from severer and downward lines (that even entered the earth) to longer and more lateral and gradually curvilineal ones upon the surface of the earth; to more and more upward lines which ascended from earth, and become at last playfully and joyously composite in the radiate pinnacles and belfries of the richer and later cathedrals. At first we have cave chapels and rock-hewn sepulchers with rectangles and triangles, that prolong the eye laterally or slightly indicate the coming rise in pyramids and obelisks. Then come progressive Greek Orders —from simple and severe Doric; to curvilineal Ionic; up to the composite and organic Corinthian—by which the Triangle is raised up into a roof fronton. Then by half-circles, circles and domes, and by arches and amphitheaters, we see the Roman art advancing Form's Evolution, and raising the Triangle aloft by superposing the three Greek columns under it in their ascending order. Till at last, Gothic tower and Moorish arch, rose-window, minaret, (and dancing forms derived in the far East from fruits, flowers and musical bells) bring us to the ultimate maturing and radiation of Architectural Growth.

LESSON XXXIX.

ART—ANIMAL AND HUMAN

WE NOW give in Chart XXXIX., for the help of our Historic Comparisons, a similarly simplified and classified survey of artistic expressions—arranged in the same three columns. By this the eye can easily connect and note the whole advance of art instinct, in all protoplasmic consciousness.

Beginning first with simple mollusks, elaborating their beautiful shells; we then note the insect arts of grub, cicada, wasp, bee, ant or spider—the termite ant becoming already an architect, and the tarantula spider a cabinet-maker.

Then come the bird arts: weaving, sewing and plastering their homes; the animal arts displaying the skill of beaver, prairie-dog, muskrat, field-mouse, or ape, by cutting of timber, doming of roofs, burrowing of roadways, and interlacings of foliage.

Then primeval man pounding and splitting his humble conceptions of art, out of flint and bone, and decorating them with rude drawings of hairy mastodons that have long become extinct.

Then barbaric man as mound-builder and druid, striving to present symbolic and domestic forms based upon the Geometry he detected in God, and worshiping the Great Spirit according to his own humble human insights.

Then man, half civilized, improves his implements, increases their decorative grace and raises his religious totems into temples and mythological concepts.

Finally, Humanity, as we now know it, perfects its mechanisms of transportation or defense, its tests of international intelligence and skill by higher commercial comparisons, art exhibitions and daily comforts; and classifies more deeply and comparatively their cosmic concept of an Infinite Creator and Common Father.

OUT OF this, in still higher order of soul development and mind comprehension, must inevitably come the Lasting-Principles-of-an-Essential-Beauty and the overwhelming conviction of an Immortal-Moral-Brotherhood.

The sublime Vision-of-Unfolding-Art must be followed up logically and progressively, as we have striven to do, from unconscious or semi-conscious workings of most primitive instincts, to the highest attainments of commanding genius; and from the humblest conceptions for material *utility* to the sublimest expressions for *spiritual* Beauty.

The intermediate and derivative combinations or modifications must be, of course, incalculable and stupendous; but it is of the utmost importance to note, throughout all the majestic unfolding of Art, those sublime *spiritual Conditions* of Will, and manifestations of Relation in Primal Energy, which operate upon the particles of matter. These all give clear character to Form; and probably, kinetic conditions to Chemistry; qualitative conditions to Substance; subjective sentiment to Color; and, of course, temperament to Personality, through all the "rigorous, plastic, diffusive" phases of motion, emotion and production.

Throughout all this stupendous chapter we see that Organic Style must ever spring from sincerity, vitality, originality and consistent character, tempered betimes to situations of necessity or propriety.

Before such a spectacle of glorious Order, System and *Spiritual* Significance, the soul of man must open with reverential awe and feel with sensitiveness and sympathy, before the eye can properly detect, or hand interpret the enduring and uplifting inspirations of Beauty.

This becomes equally indispensable in any vital and reliable school, either of art instruction

CHART XXXIX.—ART—ANIMAL AND HUMAN

MOUND BUILDERS
ARCH AT DELOS
HUMAN ART (HALF-CIVILIZED)
TOMBS
GATES
&c
MYCENÆ
HUMAN ART (CIVILIZED)
UGLINESS.
SCORPION
SCUD
FIREFISH
TOAD
BEAUTY
MUSICA

or of criticism; and to any historic appreciation of Degrees of attainment; and to all discernment between Beauty or Ugliness; and to all proper Application to industrial material. For as Beauty is the observance of esthetic principles, Ugliness is the evidence of their absence or disregard; and every stage of human progress will have examples of each, in varied proportions, as though for our encouragement or proper warning.

These Principles may appear along all three planes of "physical, mental or moral" adjustment, and in all materials and fields of Competition; Coöperation or Coörganization—whether for rivalries of strength; for utilities of domestic service and charm; or for the most lofty culminations of Poetry, Music and spiritual Art. All Nature is thus seen to be a *vast mirror, symbol, school and workshop of highest and holiest Effort*—alike of the Divine Spirit to pervade all matter, mind and emotion; or of humanity itself to comprehend, convey and worship

The Light that penetrates our intelligence;

The Life that cheers and redeems our soul, and

The Realizations that are uplifting our Race and Planet.

LESSON XL.

ART POINTS-OF-VIEW AS TO TREATMENT

(See Chart XL.)

THERE ARE various ways or Attitudes of Mind in which the artist may approach any art subject and suggestions of natural beauty—due partly to his own esthetic moods, or to hers; and also to appropriate considerations of necessity and limitation in purpose, place, time, use, material.

Nature is a great storehouse of supplies and suggestion, but leaves to each individual his own selection for interpretation, adaptation, Point-of-View.

Thus, he may be struck by certain *external* conditions in the setting and circumscription of the theme or form, and so develop the beauties befitting spaces, outlines, boundaries, backgrounds.

Or (as in row 2) by the *internal* constructive and geometric life and mystery of form, so as to allow these aspects special emphasis and prominence in the final effect.

Or again, (row 3) he may so simplify or modify the forms as to take up the spirit of the mechanical agent or tool utilized in presenting them. This is often done, under modern conditions, but requires great taste and good judgment to retain the essential excellence in the character of both form and tool, without serious loss or sacrifice to either. It is a high art to make an artistic virtue out of a mechanical or material necessity, (whether of stone, clay, iron, or other; or by chisel, brush, lathe, etc.; or in the handles, covers, links, keys, etc., of use).

Or (rows 4 and 5) he may be unembarassed by material, yet by reason of taste or by distance from eye, or by quality of surface, or character of surface, the artist may prefer to attract us to the beauty of *general features* in the ornamental and ornamented forms; or, vice versa, attract us to local and special *individuality* and daintiness of *details*.

Again, the artistic imagination and creative faculty has, in the greatest ages and noblest intellects, always pierced beyond the external attributes and obvious beauties of Nature's work, to the internal suggestions and spiritual significances. Hence the grand and classic statues or paintings of history, presenting *ideals* or personifications of gods, archangels, virtues, graces, and even the nobler animals and flowers; and, of course, man in his nobler moods and efforts—as where Apollo wars, Cupid loves, Pallas rules, Pegasus flies, and Flora blooms, or the Good Shepherd saves his sheep.

In rows 5, 6 and 7, we see three treatments of the eagle illustrate three varieties of Interpretation. In row 5 the eagle is seen and rendered at an hour when he appeared merely a stooping scavenger and bird of prey. In row 6, his majestic flight, power, far vision and fearless aspiration are seen and *idealized* as the better part of himself—a truer truth. Finally, in row 7, his attributes and parts are reapplied in wholly novel situations and conjunctions, in order to *symbolize* the spirit of nationality, sovereignty, etc.

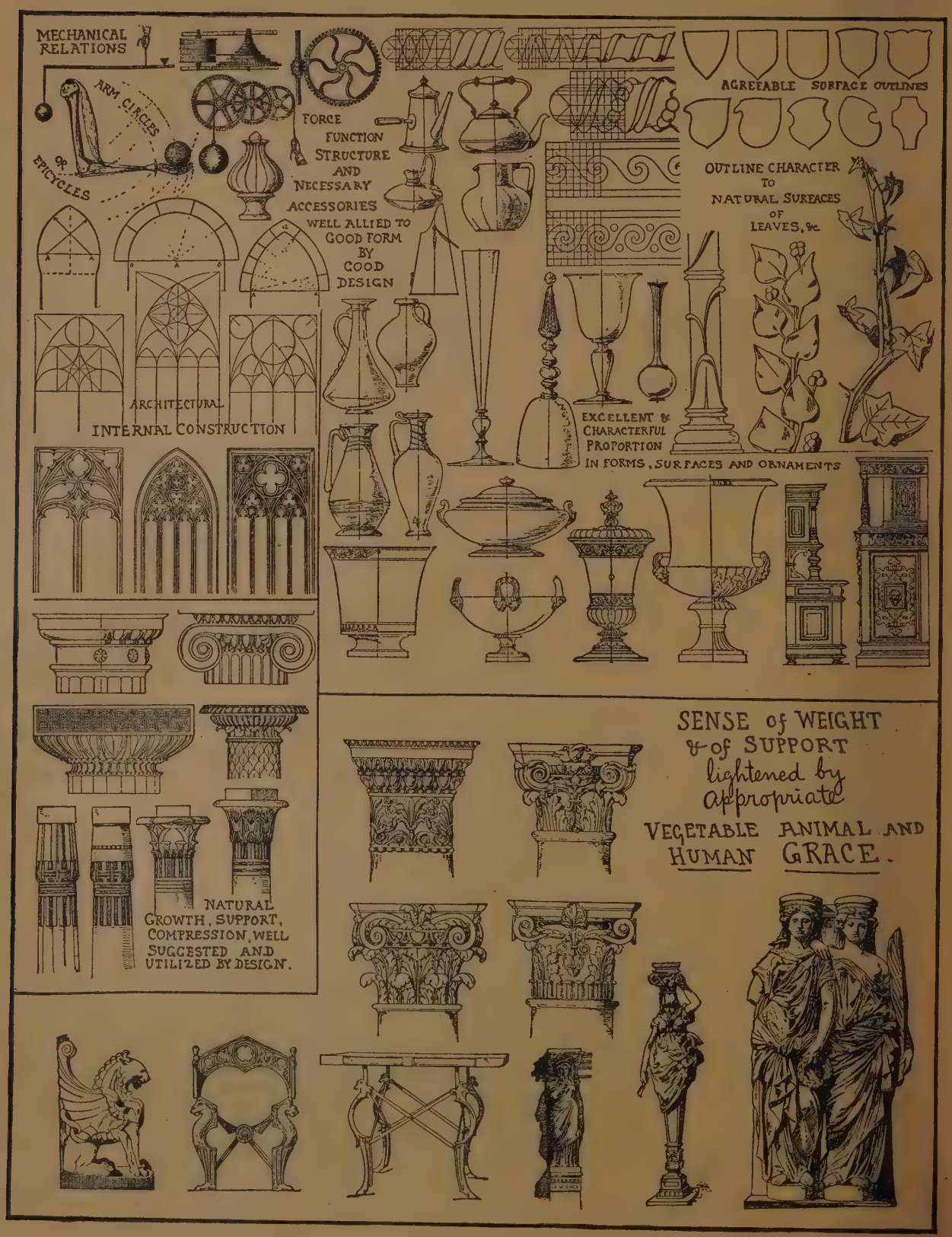
In row 8 we have the same artistic freedom of good Conventionalization, which selects, rearranges and reapplies the purely ornamental suggestions of Nature for dominantly *decorative* rather than didactic, historic or mimetic purposes; and is chiefly associated with Industries.

In the last row we see examples of artistic effort, first to magnificently *characterize* and to bring to art culmination the inherent *poetic* idea of God in his creature (as indomitable courage in the lion, etc.), yet without overstepping natural conditions and limits; next, to frankly and deliberately overstate or exaggerate for Caricature (not necessarily for humor); and then, lastly, to employ art distinctly for Humor.

CHART XL.—ART POINTS-OF-VIEW

IDEALIZING ~
ASPIRATION
SYMBOLIZING
ROMA
CONVENTION-
ALIZING
~CHARACTERIZING~
~CARICATURING ~
~COMICALIZING~
AN ATTACK OF THE BLUES.

CHART XLI-(*a*).—TECHNICAL APPLICATIONS



LESSON XLI.

TECHNICAL ART APPLICATIONS

(See Charts XLI–(*a*). and XLI–(*b*).)

I HAVE tried to show something of Universal Heart and Mind, as revealed by Nature's Spirit working between the atoms of matter and expressing herself in Beauty by means of them—showing her Hand in her Handiwork—in this her Earthly Studio.

Artistic man must do the same in his work—respecting and reflecting her Cosmic Spirit to give Beauty; adding something of himself to his work to give Individuality and Style; and, finally, such consideration for the properties of material agents and the *spirit already impressed by nature upon all atoms* that we associate the charms of technical sympathies to the charms of design. Thus by bringing Heaven down to earth we raise earth up to Heaven.

Applications of Art are, and should be, as infinite as man's materials, tastes and needs. Special technical recipes and illustrations are too equally infinite to record here, and must be consulted in libraries, museums, shops, where special experiments are recorded for each material. But their main bearing and essence may be outlined and observed.

Thus a man's spirit is conditioned a priori by race, climate, temperament and environment, and as his body, utensils and productions are conditioned by mechanical and material limits, so good taste begins in frankly and sincerely accepting and revealing these Natural Conditions—trying not to evade, nor distort, nor suppress them, but so to apply Principles upon them as to wring Beauty out of them. This applies alike to the object and to its ornamentation.

Again, the chief beauty of one thing may be its *Use*, while the chief use of another may be its *Beauty*. In still others, Use and Beauty may be happily combined. The highest taste consists in clearly discerning and adjusting these aims and characteristic motives.

Thus the true beauty in the lines of a modern plow over a barbaric, is that they veritably express its functions *better;* and by a mysterious principle in nature itself and in the laws of spirit, our eye and mind is most delighted by the best. While of several carriages rolling by, with equal mechanical excellence and comfort, one may far excel another in grace and taste.

And still more purely we look for dominant spirit and sentiment in things which appeal more solely or preponderatingly to our spirits rather than to our bodies, as do flowers more than fruit, or a fresco more than a carpet.

As however this planet is neither for bodies without spirits, nor spirits without bodies, but for the right *union of the two*, so the humblest utility and material may be ennobled, and the loftiest spirituality should be made general and practicable. The utility must rise to the most Beauty consistent with itself and possible to its material, to survive competition; the Spirituality must condescend and become incarnate or incorporate, to be properly *felt* and effective.

This Duality of Incarnation is an Ideal in Nature which she is forever symbolizing and effecting, and which she would have us complete. God is the first and greatest Artist-Artisan!

Hence, in every situation, the good designer will promptly seek and express, in his creations, Appropriateness to purpose, place, time, materials. He must start from *within* both his own spirit and that of his agents, and reveal all this to our spirits. His wisdom must appear from the start, in the *Inceptive Spirit*, the "ghost-lines," outlines, constructive proportions, masses, joints, etc., just as the Almighty indicates his plan of a human body by its skeleton, and his orderly Sequences of develop-

Spaces, Outlines and Ornaments Appropriate to WOOD WORK
Appropriate STONE WORKING
FORMS STRENGTHENED in Reality or in Appearance by the Artistic Elements.
MATERIALS, USE and MODE of MANUFACTURE Suggested by Form and Ornament.
Good Design—direct from the Character of metal.

ment,—"First, the blade; then the ear then the full corn in the ear."

So the tree is, first of all, beautiful in winter or early spring, by reason of its main character in construction, movement, proportions, junctures, etc; then beautiful in summer by its added and harmonious leaf-surfaces, broad, quiet color-tone, and graded light; then, finally, brilliant and complete in the decorative details of its fruit or flowers; and so with all true works of Art.

Each Phase of organic movement, limitation, subdivision, distribution, juncture, or association, coloration, illumination or decoration, is suggestive for timely selection and emphasis in design.

LESSON XLII.

TECHNICAL ART APPLICATIONS—(*Continued*)

(See Charts XLII–(*a*). and XLII–(*b*).)

WE HAVE noticed, in the preceding Lesson, that good taste begins in the very first Attitude of the artist toward his purpose and material, in the Form and Proportions he gives the object, and in the evidence of this consideration in his Treatments, alike structural and decorative.

The most satisfactory results are frequently seen to flow as *vital decorative effects from the very necessities of structure, use, manufacture.*

This same sincerity to *internal organic life and propriety* should similarly penetrate and decide all applied Ornament, when added to embellish and enrich the object designed. *The ornament should never belie, oppose or confuse the nature, use and spirit of what has constructively preceded.* The ornament and object ornamented should seem as *vitally one* as the leopard and his spots, the peacock and his plumes.

The artist's aims should be, not to hide preceding Beauties but to perfect and emphasize them; or, at the very worst, to offset some deficiency in the material, or compensate some limitation in structure—imposed perchance by cost, use, etc.

It is evident that the more familiar the student makes himself with any material, alike in its nature, use and manufacture, the better he is likely to recognize its limitations and possibilities; and the more familiar he becomes with General Nature the more aptly and sympathetically he will *select* from her the special suggestions and artistic elements which best apply to the special case and material in hand.

It is equally evident that the principle of Sympathy and Familiarity applies to each climate, nation, society or individual. For (using the simile of Holy Writ) the true artist who perceives the Spirit and Principles of Nature, needs no voyage to heaven to bring Beauty down, nor to hell to bring it up, "for, lo, it is nigh" in every local characteristic and charm of individual refinement, imagination, taste and power to *wisely select and adapt.* For this alone can give the grace of freshness, spontaneity, originality, and ultimately the historic value of a style without affectation, an art without artificiality, and a sentiment without fad, fashion or sentimentality. "A live dog is better than a dead lion," and a ripe wild grape is sweeter than the most pompous Dead-Sea apples of importation and mimicry!

In going to natural Beauty for ornamental suggestion it is obvious that her movements and

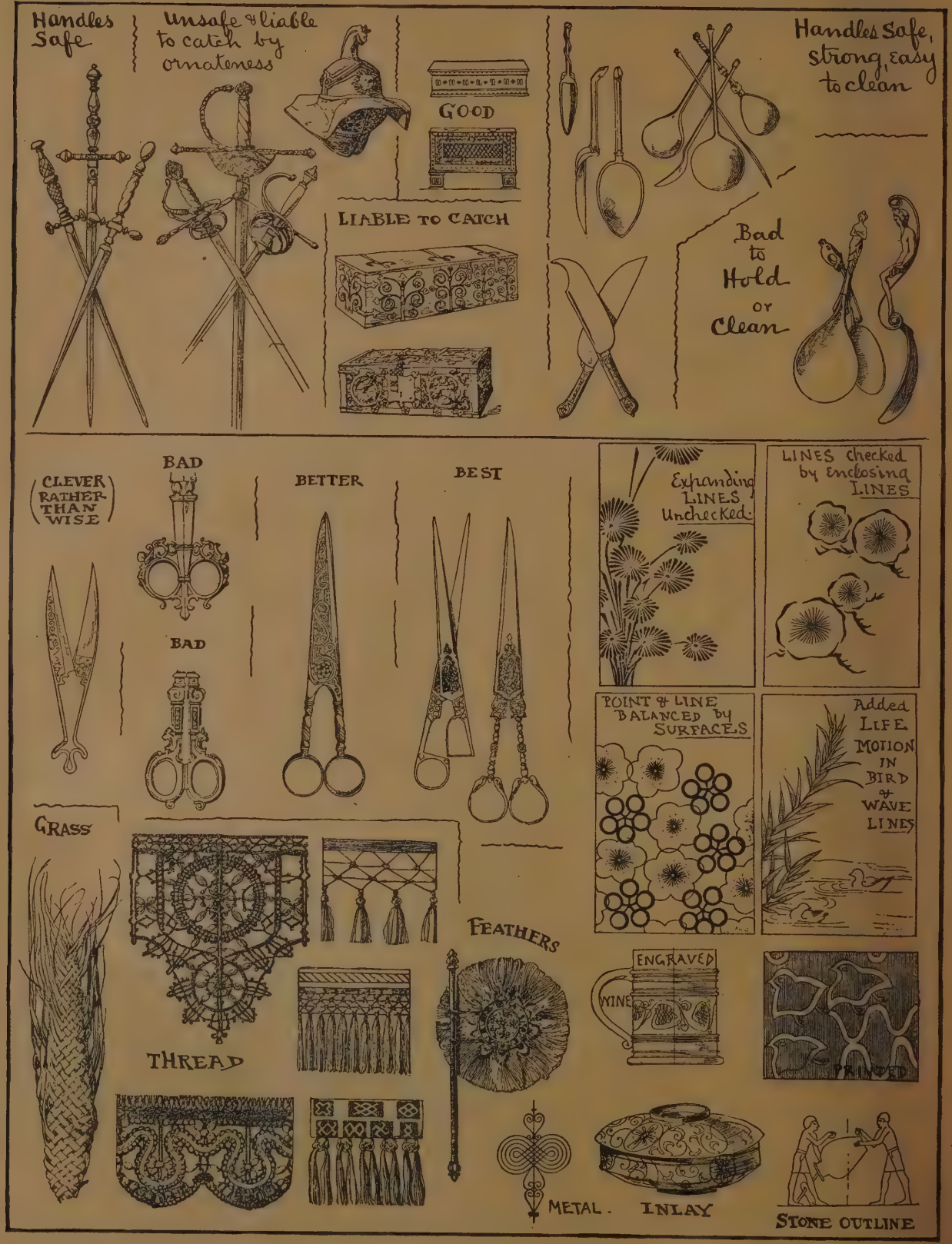

Handles Safe
Unsafe & liable to catch by ornateness
GOOD
LIABLE TO CATCH
Handles Safe, strong, easy to clean
Bad to Hold or Clean
(CLEVER RATHER THAN WISE)
BAD
BETTER
BEST
BAD
Expanding LINES Unchecked
LINES checked by enclosing LINES
POINT & LINE BALANCED by SURFACES
Added LIFE MOTION IN BIRD & WAVE LINES
GRASS
FEATHERS
ENGRAVED
WINE
PRINTED
THREAD
METAL. INLAY
STONE OUTLINE

CHART XLII–(*b*).—TECHNICAL APPLICATIONS

WOVEN LINES, RIBBONS &c
IRON LINES–bent and forged
SAWN WOOD–helped by SPIRIT of TOOL & of PROCESS–
FLEXIBLE THREAD & STRAPS Applied to SURFACES
POINT & LINE adapted to WALL SURFACE by STENCIL, FRESCO PRINTED PAPER &c
HARD SURFACES cut, bent & pierced
Stencil
FRIEZE
METAL ENGRAVING
S·PAU LUS
LEAD LINES & COLORED SURFACE–for GLASS
INCISED STUCCO
PEN & BRUSH TREATMENT
INLAY
FOR FLAT FLOOR SURFACE
RÉPOUSSÉ
CAST BRASS
PLAY of LINE–SURFACE & SOLID
Metal Enamel
Conventionalized SILK SURFACE

lines may best apply to liney effects or thready substances; her surface ornaments to surfaces; her solids to solids; etc. And each artist is at fullest liberty to draw fresh inspiration and suggestion from these, in all and more than those "moods of spirit" which we have indicated as historic, and with all and more of the devices than yet discovered by man.

With the KEY this book is intended to be, he may apply this Aladdin-lamp to open and explore an ever-new, wonderful and delightful realm of Heavenly Beauty, whose sacred message is applicable to every human need and aspiration. It is our privilege and our joy to bring forth, as the lilies, to the Divine Glory and to the enduring because truest, wealth of God's World.

We have seen that BEAUTY IS A UNIVERSAL AND DIVINE SPIRIT *illuminating terrestrial life, reflecting the Divine Nature, Attributes, and Principles of activity, and penetrating all times and peoples, according to their susceptibility to spiritual suggestions.*

It is essentially as precious, permanent and holy as the appreciation, presentation and practice of any Divine Principle—such as Truth, Goodness, Love, etc.

By looking for, laboring with, and hastening unto the coming of God in *all* his glorious manifestations, we shall best honor him; ennoble Character; inspire, dignify and emancipate Labor; cheer Life; appreciate Nature; and truly and permanently (because spiritually) enrich Existence both here and hereafter, till we at length behold "THE KING HIMSELF IN HIS BEAUTY."

And when we see him "*we shall be satisfied, and shall awake in his Likeness.*"

DELLA ROBBIA CHILDREN

CHAPTER XIV.

PRACTICAL CONCLUSIONS

"HARK! 'T is the golden trumpets of the dawn
Sounding the Day! . . .
Till the sky swell with hint of heavenly gleams,
And the heart break with gladness loosed from dreams!
O horns of Heaven, give your hero hail
Blown to him from the kingdom of the Grail!"

—*H. P. Spofford.*

PRACTICAL CONCLUSIONS

BEAUTY, like Truth or Goodness, is an eternal attribute of Divine and Universal Spirit, a condition of its feeling, a mode of its working, a result of its operation as it moves forth by creative intelligence, original plan, abstract but indestructible formulæ, and the agency of matter and motion, to final manifestation of immortal Principles, Sentiments and Motives.

The human spirit in all its phenomena being part of universal and harmonious Nature, must in its esthetic impressions be subject to absolutely rational and demonstrable Law, and indeed in the sequence of its historic development and creations has been found so to be.

To us, both divine and human Art is the Spirit *in* the Material, and my methods are therefore adapted to intelligent rational beings seeking the universal Spirit and Principles of Nature, universally visible, universally needed, and universally applicable to *all* men or material—the universal language of forms, structures, functions, forces, textures, lights, colors, combinations, and adaptations, through which has been delivered the marvelous revelation of natural and human Art.

Esthetic Science is as absolute science as Physics or Ethics, and as fully worthy of profound attention and application, alike from its sublimity, attractiveness and marvelous historical, social and industrial results.

At the beginning of this new century, with such light thrown upon all science by noble minds like Darwin, Spencer, Fiske, Clifford, Pestalozzi, Fröbel, etc., we can systematize, better than ever before, Natural investigation and Art Education. Recognizing in Nature a duality expressible in terms of eternity and time, space and place, static

and dynamic force—as well as repose and action, conservatism and progress, tradition and inspiration, humanity and self; we strive to *combine* mind and matter, idealism and realism, theory and practice, Artist and Artisan. On sociologic and scientific grounds our ideal is the Artist-Artisan—a balanced temperament and development which harmonizes allied and coëssential truth. Without losing sight of respective rôles, the Artist is made more broad and helpful by practical acquaintance with material, the Artisan made more plastic and efficient by becoming more artistic and sensitive. On similar grounds, we welcome practically the benefit of interfluence from opposite temperament and sex—woman's work growing stronger and more valuable, while man's grows more refined and sensitive, by contact. Best of all, Art is vastly improved and broadened by Universality and Comparison, in which essential charms and limitations of special media are clearly distinguished and respected.

My Curriculum is: Promptly and clearly to show students those Vital Principles, Absolute Laws, and Germinal Elements of Beauty which underlie all good Art work. To carefully preserve, as with natural plants, the freshness of their individuality (without stunting by mechanical or artificial means). To help it unfold wholesomely, and cultivate wisely its sentiment, taste, imagination, artistic judgment and observation—as living springs from which its beautiful creations must arise.

COMMENCING with consideration of those agreeable emotional and moral qualities involved in good sentiment, taste and refined appreciation, we show that Art is the Expression of inner Life, Perception and Personality.

It must have character, spirituality, ideality, poetry.

It must evince truth, sincerity, genuineness, frankness, virility, energy rising sometimes to sublimity. Yet will involve care, sobriety, dignity, simplicity, restfulness, delicacy, refined sensitiveness, grace, charm; concordant sentiments of unity, harmony, propriety, appropriateness, fitness, consistency of parts, conformity to conditions, congruity of ideas and purposes.

It will avoid setness, pettiness, baldness; will contain suggestiveness, and promise, implying life, growth, change, complexity, mystery, universality, variety-in-unity.

It will arouse the faculties of Imagination, for inspiration, vision, fertile invention; spontaniety, and "imprévu," vivacity, sparkle, attractiveness, buoyancy—bringing recreation and refreshment to the beholder; with gay decorativeness, picturesqueness, and even subtle weirdness.

It will draw on Knowledge and Memory for comprehensive grasp; a sense of richness, fullness, completeness, conveying sustained and serene pleasure. It will summon the intellectual faculties of Reason, Judgment and Will; by Reason demanding naturalness, wholesomeness, utility, efficiency, forethought, plan, system; by Judgment demanding selection, balance, discretion, when and where to imitate, or translate, or transmute or adapt—when and how far to analyze, specialize or generalize, idealize or symbolize, and in commerce to geometrize, conventionalize, and sometimes (for machinery) to mechanicalize; by the Will demanding deliberate initiative, volition, control, temperance—for accent, emphasis, dominance of some parts, subordination, limitation or rejection of others.

The student will then be ready to recognize these Spiritual Faculties at work on the grand scale of Nature, where Divine Power is giving force and motion to atoms; repose and action by static and dynamic energy; opposition and contrasts of tension, as in axes of crystals and gems; rise and fall, undulation and rhythm, in waves of water, sound, heat, light, etc.; to note the inevitable Art influence on eye and brain of suggested tendency, procession, parallelism, tangency, revolution, evolution, expansion, radiation, dispersion; the artistic effects of straight, oblique, curved, angular, circular, conic, spiral or radial influences with which Nature so cleverly counts as she selects and retains, from spring to spring, her exact equations of Number, Magnitude and Meter in every germ of flower, insect, bird or beast. He will note how she adapts their forms, colors, func-

tions and sentiments to primal standards and types, to purpose and place, with due regard to scale, ratio, proportion, symmetry (in form), gradation, cadence, and cæsura (in movement).

The student will thus grow to appreciate and discriminate the good in all composition; the cosmic elements which give Beauty, the vital elements which give character and style; the decorative elements which add charm, by order, sequence, regularity, equality and repetition of units (whether of form, space, color, motion, etc.); or by devices of reflection, contrast, alternation, counterchange, juncture, overlapping, interlacing, linking, cabling, strapping, interpenetration, fusion, etc.

Titian, Pinx.

CHRIST AND THE TRIBUTE MONEY

It is then proper time to observe the material and practical conditions by which artistic conceptions are best realized. The congenial character of substances and textures (whether crystalline or fibrous, rough or smooth, light or heavy, friable or tough, plastic, ductile, malleable, fusible, etc.), their market properties of rarity, costliness, permanence, etc.; or their optic properties of brilliancy, purity, translucence, etc., and the reverse; their special technical processes, limitations, beauties and suggestive possibilities—among which last are included those visual methods for Suggested-Relief-on-plane-surfaces of orthographic projection and perspective by concentrating lines and diminishing of magnitudes, of lights, of colors, of contrasts, of details.

The hand should follow the mind with daily practice from points to movements, to lines, to spaces, to surfaces simple and translucent at first (where structure is visible) to more and more complex and opaque (where structure becomes hidden, but where substance, textures, shades, colors and characters become interesting).

We advance by Line Decoration and Thread Decoration through lace and loom work; then Surface Decoration in stained glass, mosaic, enameling, porcelain work and wall-paper; then Plastic Form in clay and wax modeling, for low and high relief, ceramics, tiles, stamping and metal work; jewel, wood, stone and marble carving; to monumental sculpture. Then Construction in architecture and cabinet design; Colors and Textures in costumes, hangings, interior furnishings, and Structure and Function in organic and living forms. Then Apparent Relief,—in drawing and shading by pencil, pen, charcoal, crayon, water colors and oils, from "still life" or "live model" (undraped or draped according to appropriateness), and to engraving, etching, illustration, landscape, portraiture, genre, historic or ideal themes.

Thus Heart, Mind, and Hand are together led into a breadth and fullness of insight and experience, and the student is prepared not only to enjoy and produce intelligently, but to canvass without servility the products of other days or to enter competitively into the creative work of his own age.

It has thus become a safe pleasure and artistic profit to the cultivated student to examine the expressions in Nature and History of these Principles and material Processes of Beauty, whether in static stratification of rocks, dynamic and recti-

lineal energies of crystals and minerals, curvilineal and spiral action in fishes and shells, complex and organic design and decoration in vegetable and animal form and function. Led by every sibylline leaf or flower, insect or bird, beast or man, and kindled by the Aladdin lamps of their instinct or inspiration, he may study all adaptations to sphere and purpose, and be invigorated (not weakened) by their wonderful example—while he learns anew the sacred lesson that God has not left himself without witness—*the invisible things of him being clearly seen in the things he has made.*

By cultivating the Art Instinct broadly, wholesomely, organically, thoroughly, we make it individual, liberal, national, creative, and reveal to man that *Beauty is as universal as its application is infinite and precious.*

IT WAS undoubtedly due to the greater vitality of this Cosmic Method, that such encouraging success, for long years, attended my educational efforts in New York City and elsewhere. Applied by me for years at the New York Metropolitan Museum of Art, it rapidly raised the number of pupils from a handful to many hundreds gathered from every section of the country. Renewed, under more favorable auspices, for twelve years at the New York Institute for Artist-Artisans, and then at the Art Institute of Trenton, N. J., and elsewhere, this system has always secured the support of the public, press, and most prominent art firms, and such crowds of grateful students that accommodations and departments were constantly augmented; while its graduates have won foremost situations and prizes in the world. They are now spreading this light, strength and inspiration through the length and breadth of our land; and wherever I have had the privilege of presenting these wonderful facts of Nature and mighty implications of Divine Principles, I have ever found the soul of man adapted readily to their appreciation and assimilation and rapidly manifesting a marvelous growth, delight and ability to apply them to every appropriate material, and to increasing spiritual and material well-being.

These large outlines of Life and Beauty, in Constructive and Decorative Art, are given to our times to start it out afresh upon an *independent* and *organic* Evolution of its own—in that (ever-new, yet ever-old) rediscovery and reapplication of eternal Truth in principle and process. The illustrations of such universal Law must be as infinite as life itself. As the good householder in Scripture, who revealed the kingdom of heaven by "treasures new and old," so we have tried to quicken insight and awaken inspiration by blending new and old examples from every side of natural and human inspiration or achievement. But the earnest student who has once grasped the great truths and guiding principles revealed, should himself supplement our effort to help him by free and varied researches of his own—for, as Milton says, of our first parents:

> "The world was all before them, where to choose,
> And Providence their guide."

The pages of nature, history and archæological collections are as limitless as are the ever-fresh creative forces of Mind, Heart and Imagination. We should especially urge the habit and practice of original Observation, Analysis, Comparison and Composition to develop personal interest, spontaneity and power; and (above all) that deepest and most important element of Art growth, Sympathy, Sentiment, Selective Taste and Poetic Passion. The immortal hunger of the soul, throughout all its mental, emotional and material channels of self-culture and expression, demands that its destiny be fulfilled and sustained *on every side*, and by *every true* ally. We must generously help our age, and be generously helped in return by it.

To this end let each eager artistic spirit revisit and reinvestigate every pure spring of inspiration that we have pointed out; and, like some paradisial humming bird on tireless wing of passionate love and genius, drink up afresh the honeyed nectar within every opening flower of Beauty and Sympathy. This is, indeed, to live and to

adore! Out of it must always come sublime self-consecration and creative effort, and the true Brotherhood and Sisterhood of Heaven—which begins in time before consummated in eternity.

Put yourself in touch with the Divine on every side of its terrestrial expression, and in every beautiful life-struggle or human aspiration. Become acquainted, as artists, with the works and life-thoughts of your great precursors, Phidias, Michael Angelo, Donatello, Della Robbia, Angelico, Mantegna, Botticelli, Francia, Holbein, Dürer, Correggio, Raphael, Da Vinci, Titian, Veronese, Velasquez, Rembrandt, Van Eyck, Massys, Millet, Barye, Hokusai, Rossetti, Watts, Morris, Winslow Homer, etc. "Acquaint yourself and be at peace" with the Spirit of Beauty in your *own* nature and nation, and fortify your insight and sensitive touch with every true and fine spirit anywhere, through any channel accessible.

Photographs and autotypes of the great art galleries bring visibly to every home, to-day, the masterpieces of composition; and circulating libraries put the humblest in touch with the great Art Creators, and with such friendly teachers or critics as Plato, Vitruvius, Vasari, Cellini, Winckelmann, Lessing, Grimm, Le Duc, Tolstoi, Couture, Breton, Blanc, Chesneau, Colvin, Carpenter, Meyer, Gosse, Symonds, Paton, Lafcadio Hearn, Louis Day, Walter Crane, and whosoever, as the poet Bryant says, "in the love of Nature holds communion with her visible form" and—speaking her varied language—reverently opens up another Window of Vision in "The House of the Kind Interpreter."

To accomplish this growth for yourself and your age, you may well be called upon to exert unfaltering courage, constancy, sympathy, insight and enthusiasm; and profound devotion to your purest love of Beauty, Progress, Humanity; and the advance of the largest science, ethics and social brotherhood in labor. You may even thereby encounter the obstruction, prejudice or persecution of the narrow, ungenerous or unrefined. But you will ever have the consolations of that great army of industrial genius and heroism of all ages—who "by faith" in the Great Captain have "wrought Righteousness," and by patient continuance in Well-Doing have sought for Glory, Honor and Immortality—ETERNAL LIFE.

THE CHRIST OF DA VINCI

"When he had Opened the Book,
He found where it was written,
The Spirit of the Lord is upon me, because He hath anointed me to preach
The Gospel to the Poor;
To Heal the Broken-Hearted,
Deliverance to the Captives,
Recovering of Sight to the Blind,
To Set at Liberty them that are Bruised,
To preach the Acceptable Year of The Lord.
And he closed the Book, and he gave it again to the Minister,
and Sat Down."

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